THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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The Cultivator & Country Gentleman.

THE WHEAT CROP.

As a specimen of a good and profitable crop, we take at random that raised in 1858 by DE AZRO A. NICHOLS of Westfield, N. Y., reported in the New-York Agricultural Transactions:—

The land was 4 9-10th acres—it was clover sod, plowed late in summer, and the wheat was sown early in autumn. The cost of plowing, harrowing, drilling, seed, harvesting and thrashing, with interest on land and taxes, was $111. The wheat (155 bushels, 63 pounds per bushel) and straw were worth $252—nett profit, $141, or about $28 per acre. We have known many crops much larger than this.

GEORGE GEDDES, in his Agricultural Survey of Onondaga County, estimates the following as the cost of an average crop on a good farm, or twenty bushels per acre, (although over 40 bushels are sometimes raised,) with the nett profit:—

Plowing once,		$1.50
Harrowing and rolling,		.50
Drilling,		.31
Seed, 2 bushels,		2.50
Harvesting,		2.00
Threshing,		2.50
		$9.31
20 bushels, at $1.25,	$25.00	
Straw,	2.00	
		27.00
Profit per acre,		$17.69

The wheat crop is more liable to uncertainties than corn and oats when all are accompanied with good management; yet with these uncertainties the best farmers obtain as an average at least twenty dollars nett profit yearly in payment for interest on land, taxes, and for superintendence.

Every farmer naturally asks himself the question: How can I always secure such results? A brief summary of some of the leading requisites may assist young beginners.

1. The first, unquestionably, in most good wheat districts, is regular *underdraining*. There are but few places where a strong soil has any other way to get rid of its surplus water than by its soaking slowly, drop by drop, from one side of the field to the other, through the earth, and by evaporation. The first requires weeks; the second a long time, with a large removal of heat carried off latent in the vapor. The drained soil works more easily, is always mellow, is less liable to cause winter killing; and producing an earlier growth and earlier maturity, enables the crop usually to escape the midge.

2. The second is *proper fertility*. Manure improves the texture of the soil, and also causes the grain to vegetate more evenly, to say nothing of the universally admitted influence on good growth. It is more important after other grain crops, as barley and oats.

3. *Winter Protection.*—This may often be given at the same time that fertility is imparted by top-dressing. Spread manure, left over from spring and composted with straw, turf, or muck, well rotted and broken, on the land after it is plowed, and before harrowing and drilling, and it will protect the surface soil and prevent crusting; protect the young plants from wind and freezing, and cause their early growth. It also induces a more ready and certain vegetation of the grass seed. Even if spread finely and evenly while the ground is frozen early in winter, it has proved valuable, and saved a crop of Mediterranean wheat from winter killing, when the undressed portion of the same field was nearly destroyed. Knolls and the more sterile parts of the field should have the larger portion—or all the manure if there is a limitted supply. On very rich land this top-dressing may be useless, or possibly injurious in rare instances by inducing a growth of too much straw.

4. *Good Tillage.*—The soil must be free from weeds, and be well pulverized. Summer fallows are more useful in effecting the first of these two results on light than on heavy lands, generally, and more important for pulverization on the latter. On well managed land, that has a good clean soil, it is not necessary. A clover sod, handsomely inverted late in summer, and then rolled and harrowed, or what is decidedly better, worked with Shares' coulter harrow, forms a fine preparation for wheat. If wheat is sown after oats or barley, an effort should be made to have the stubble as clean as possible. Pigs, geese, and other small animals, should be turned in as soon as the grain is removed. If the weather is wet, the surface should be harrowed to cause the scattered seeds to grow. The growth of green herbage thus produced must afterwards be thoroughly and completely turned under with the plow, and the grain sown on the inverted earth after harrowing. The best way, perhaps, whether the surface be wet or dry, is to plow as shallow as practicable as soon as the crop is removed, to be followed by a second and much deeper plowing before sowing the seed. This will start many of the seeds of weeds, and allow the stubble to decay.

Heavy clay lands, that have not been well underdrained, will usually become cloddy; and they often will, in wet seasons, even with draining. The roller and the harrow reduce these clods very imperfectly; the cast iron clod crusher is far more efficient; and a broad stone boat, properly loaded behind, will often be as much and sometimes more efficient, in grinding down the clods. After using the clod crusher, the soil should be loosened up again by means of a long-toothed harrow, a two horse cultivator, or still better by a scarifier. This loosening is important.

When manure is applied, in whatever way, it should be very thoroughly mixed by repeated harrowings. It thus possesses twice the efficiency over scattered, half broken lumps. If applied only as a top dressing in winter, for protecting the surface, it should be first broken very fine, in order that it may be evenly spread.

5. *Drilling* in the seed, instead of sowing and harrowing in, is a decided advantage. The depth may be better controlled, and a more uniform depth secured. It may indeed in some cases be drilled injuriously deep, but this is only an abuse of the operation. Drilled wheat is less liable to heaving by frost, and if the drills run across instead of with the direction of prevailing winds, the slight furrows formed by the drill serve to protect the young plants when the ground is bare. Numerous experiments show that the advantages of drilling are generally equal to about five bushels per acre, on good wheat land.

6. *Trench Plowing.*—In some instances, the crop may be much increased by mixing the top soil and a small portion of the subsoil together. We have known instances where running the plow two inches deeper than usual, has resulted in a large increase of the product the first year. In another case, an open ditch was cut, and the excavated earth scattered a rod each way. The estimated product on these two strips of land was 20 bushels per acre; on the rest of the field it did not exceed 5 bushels. The draining may have had some influence, but obviously this was quite subordinate. So valuable is a portion of the subsoil in certain localities, that an extensive and successful farmer in a fine wheat district in western New-York, said he would gladly get rid of a few inches of the upper soil, over his whole farm, in order to come nearer the next stratum below. In these instances, although all in what is termed limestone regions, the upper or common soil never effervesced with acids, showing the absence of carbonate of lime, while the subsoil always effervesced considerably. The use of lime has always proved beneficial wherever tried, in these regions; and doubtless the same result as by liming, is attained by bringing up the soil from below. In many other places, the subsoil may be useless or positively injurious. The experiment is easily tried on a small scale, either by deep plowing, or by throwing up from deep holes or trenches.

By a proper attention to these points, as may be required, namely, underdraining, proper fertility, winter protection of the surface, fine tillage, and drilling in the seed, and also in some cases trench plowing, the common uncertainties attending the wheat crop, may be either entirely prevented, or their evil effects greatly diminished. The removal of water by underdraining tends greatly to lessen the danger of heaving and winter killing; destruction in consequence of a bare winter and cold winds, to which the Mediterranean wheat is more especially exposed, is prevented by top dressing. Early maturity, caused by several of these points of good management combined, tends to enable the crop to escape the midge and rust.

It is said that formerly, the prevalence of the Hessian fly, by compelling farmers to improve their management, in order to escape total destruction of their crops, proved a positive benefit, by raising the standard of agriculture. Possibly the wheat midge, by driving farmers from the old skinning system (for it seemed truly a systematic ruin of their land,) and compelling them to adopt the mixed husbandry which is absolutely essential to the highest profit in grain growing regions, although this insect has been an object of such wide extended and lasting dread to many, may in a similar manner ultimately prove a substantial blessing, at least to all those who may have profited by its unwelcome teachings.

Good Pigs.—We often see accounts published of large crops, the great weight of various domestic animals, &c. I would state that Mr. Seth Brockway, one of my neighbors, killed a few days since two pigs, nine months and twelve days old, weighing as follows—350 and 415 lbs.—765. They were fed in all 50 bushels of shelled corn—the corn was boiled or ground into meal, besides the slops from the house. They were a cross, Suffolk and Chester White. N. E. A.

Manuring Wheat on the Surface.

I should be glad of your advice through THE CULTIVATOR, on the following: I must premise that my farm (75 acres,) is most of it hilly, and perfectly dry. My two great objects of attention are wheat, and clover for sheep. Now you recommend to put a top-dressing of short manure and harrow it in, for the wheat crop. I should like to do it on all my wheat land, but I find it takes almost, and sometimes quite, all the manure I can make, for my corn, potatoes and turnips. How would turf and earth from the sides of the brook, and from hollows between the hills, answer for this purpose, if dug in the spring and mixed with lime, which costs about 20 cents a bushel within a short distance? Do you think it would pay for the labor? How much do you think it would add to the wheat crop, and how many bushels of lime per acre would you recommend? JOHN ATKINS. *Fonthill, C. W.*

The object of manuring the surface is two-fold. First, to enrich the land by presenting the elements of fertility near the surface, where most of the roots of the young wheat plants are found. Secondly, to protect the surface from the effects of hard freezing. The latter is most important on heavy soils. There is another advantage where clover seed is sown, in the greater vigor imparted to the young plants, and the seed "catches" better. The lime compost would give these results but very imperfectly at best. In some localities, lime is very beneficial to wheat, but the degree of benefit can be determined only by experiment; for in some regions where lime occurs in abundance, as for example in parts of Western New-York, its application has produced decidedly beneficial results; while in others, where it does not appear among the rocks, as in some parts of New-England, its effects have been imperceptible. We would recommend our correspondent to try the experiment he proposes, as the only way to determine its utility. The quantity of lime per acre is not agreed on by different agriculturists, and varies from 25 to 200 bushels or more. Fifty would perhaps do well for a trial.

Would not the earth from the brooks and low places used in the manufacture of compost, so increase the amount of manure as to admit of manuring both corn and wheat? A free use of litter, forest leaves, dry turf, &c., by absorbing all the parts that are more or less wasted, will sometimes double the ordinary amount of manure.

THE BAROMETER---AN INQUIRY.

Within the last ten years science and the arts have done much to lessen the labors of the husbandman, and to render him better acquainted with the laws of nature; and thus he is enabled to protect himself, to a certain extent, from her changes and vicissitudes. As evidence of the increasing attention which is given to the science of meteorology, which is most vitally connected with the interests and occupation of the farmer, we now find the thermometer in almost every house, and have reason to believe that its changes are for the most part carefully observed, and in all cases a love for scientific observation and investigation is created, which cannot but prove highly beneficial. The barometer is another instrument not as generally known as the thermometer, and which (if half of what its venders and manufacturers say of it is true) is capable of rendering almost incalculable benefits to the farmer by forewarning him of the coming storm, or other changes of the weather.

Doubtless most of your readers have read of its great value on board of ships by warning the mariner of approaching storms and tempests long before his experienced senses can detect the least sign of their approach. To the farmer, "with scarcely an exception, the barometer gives a decided notice of all changes of the weather, as wind, rain, clear, &c., from twelve to forty-eight hours in advance, and by the manner of its movements indicates the *duration* of the change."

The value of such a guide is evident to every one. Whether the above description is truthful and to be depended upon is the object of this article. Any of your readers that have given the barometer a fair trial, and are not interested in their manufacture or sale, who will give us a statement of its *value* to the *practical farmer*, and any other facts connected with the subject, will confer a a favor on many of your readers, as well as

St. Lawrence Co., N. Y. ST. LAWRENCE.

We have used a barometer in connection with farming for about twenty years, and in different localities. In some places, where the changes of the weather are more frequent and sudden, the barometer is more uncertain in its indications. It is not so reliable as at sea. The common marks on the scale, of "fair," "changeable," "rainy" and "stormy," are of no use, and serve to mislead; the only rule to be observed is this:—When the mercury falls, rain or wind may be expected—usually rain in summer, and wind in autumn and winter. When the column rises, fair weather may be relied on. In winter it stand highest in sharp, clear weather. On the whole, a barometer is a great help on the farm. Never buy one with an index and dial, but one that shows the mercurial column, which is the most reliable and satisfactory.

SOILING AND MANURE.

I see it repeatedly stated that, by soiling in place of pasturing—1st. That one half more manure will be made from the same amount of stock and feed supplied.—2d. That about the most economimal system of applying manure is to haul and spread it upon the land in its green state—3d. That by using litter, such as straw, leaves, weeds, turf, muck, or soil dried, the liquid portion is made equal in value to the solid. Some addition may be caused by less exercise of animals, causing lesser portions to be carried off by respiration and perspiration—2d. The solid portion, by care, might suffer less by exposure to the sun, rain, &c., and in this case what becomes of the economical method urged by many, of hauling and spreading in its raw state, to be exposed to the storms of fall and winter?—3d. As to the liquid portion, it looks to me very difficult to make a better disposition of it than that the general turf and soil should drink it, to nourish vegetation. We have enough of problems. What we want is solutions. W. E. P. *Eden, Erie Co., N. Y.*

Our correspondent having furnished these problems, we shall endeavor to give him the solutions. Manure drawn out and finely and evenly spread on land late in autumn, is washed into the soil, or if not washed in, then absorbed by it as slowly dissolved by rains. But if scattered in lumps, as by cattle running over the pastures, the same good result cannot be obtained. And if finely spread in summer, without even a shallow covering, its effects may be quite different—at least so experiment indicates. The usual waste by the escape of the liquid manure from barn yards, is by streams and channels that never pass over lands desired to be enriched; or if such streams do pass over the land, it is so uneven that most places get none, and a large surplus escapes.

An important advantage in spreading manure over fields, instead of leaving it in large heaps, is that the latter will ferment, and unless properly supplied with absorbents, much volatile fertilizing portions will be lost.

Manure finely spread, and finely diffused through the soil by repeated harrowings and by plowing, or by being washed into the earth and thus more finely diffused than could be effected by the finest teeth of the harrow, is far

more efficient than if thrown in lumps over the surface, or imperfectly plowed under in lumps. One great advantage in forming composts, is the fine pulverization that may be given to the coarse fiber of the litter by decay; and the advantages of this fine pulverization are often so great as to induce some to believe that rotted manure is really more efficient, essentially, than the fresh manure from which it was made, although much of it has already gone to the winds.

CULTURE OF THE WHITE BEAN.

EDITORS COUNTRY GENTLEMAN—A short article on the soil best adapted to, and the proper cultivation of, the the white bean, would be acceptable to some of your readers. BAY STATE.

The cultivation of the bean should be extended. The crop has this great advantage—if the price is low, the beans may be mixed with corn and other grain, ground, and fed to cows and sheep. They are one of the very best kinds of food for milch cows. The crop does not impoverish the land, and when fed to domestic animals, the manure is rich and valuable.

Many suppose that poor land is necessary to raise white beans—only because they will grow better on poor land than other crops. Manuring the land for them has doubled the crop. Nothing is better for them than good rich corn land. If the soil is rather heavy, an excellent way is to turn over clover sod late in spring, roll and harrow it, and plant the beans. There will be less hoeing needed, as fresh inverted sod is usually clean soil. When the soil is free from weeds, the best way is to drill in the beans, so that the drills may be about 2½ or 3 feet apart, and the seed about 2 inches apart in the drills. If a drill cannot be had, furrow out the land, and drop the beans by nailing or tying a small tin pail to the lower end of a rod about the size of a walking stick, make a hole in the bottom large enough for the beans to pass out, and walk along shaking it over the furrow. The quantity or distance may be perfectly regulated by making the hole the right size from trial, by shaking more or less rapidly, and walking slow or fast. If the soil is weedy, plant in hills a foot and a half apart in the row, and seven to a hill. The beans will be yellow in three months and ready for harvesting, which is done by pulling them. If the weather continues dry a few days, they will soon be dry enough, if placed in small heaps. If wet weather is feared, take the bunches and place them in small stacks made around a pole driven into the ground, radiating from the centre or pole, and with either roots or tops out—these stacks may be as high as a man can easily reach, and should be built on four small sticks at the bottom, the size of stove wood, laid across, to keep the beans off the wet ground, and to allow the drying wind to blow under. When quite dry, draw out the pole and draw them to the barn, and thrash in winter. As a single proof of the profits of bean raising, T. C. MAXWELL & Co., of Geneva, N. Y., recently informed us that they had planted small white beans in the vacancies of their extensive nursery, where trees had been dug last spring,—amounting altogether to about 40 acres. The cultivation cost almost nothing, as they stood in rows of scattered trees; but they think if the beans stood alone, the whole cost of cultivation would not have been eight dollars an acre. They had 800 bushels of beans, which sold, at $1.50 per bushel, for $1,200. The cost of cultivation, estimated at the very highest at $320, deducted from this sum, leaves a clear profit of $880 for the use of the 40 acres of land. They have fine, rich, tile-drained land, but it had evidently been considerably exhausted by the previous growth of the trees.

COAL ASHES.

I make from four to six loads of these every winter, which in spring I pay to have carted away as of no use. Our coal differs from your hard anthracite coal. It is bituminous and soft, and burns with a blaze; consequently is reduced to a powder when done with. Would it do to mix the ashes with horse and cow manure, by throwing ashes and all into one heap? Have the coal ashes any specific agricultural properties, and would the mixture of such ashes and manure harmonize, or would one destroy the good effect of the other? The cost of transporting these ashes is another consideration. My summer house and winter house are 20 miles apart, and it costs me 60 cents a load to haul manure in the spring. Would coal ashes be worth 60 cents a load to me? Again, in the summer I haul considerable swamp muck to my place. I suppose the ashes would do very well to mix with the muck; but then would it not be cheaper to use lime than coal ashes at 60 cents a load? An answer would greatly oblige A SUBSCRIBER. *St. John, N. B., Jan.* 11, 1862.

Coal ashes are nearly all earthy, and contain a very little lime and alcali, say about one twenty-fifth to a fiftieth part of common wood ashes. Both vary considerably in their composition, and the wood ashes may sometimes have more than a hundred times as much alcali as coal ashes. The amount in the latter is however often somewhat increased by the wood used in kindling the fires. While therefore it possesses some value for its potash, soda, and lime, it is chiefly useful as an absorbent, being very dry, and in powder. Placed in stables (in the liquid manure gutters, for instance) where it may become saturated with the urine, it becomes very valuable—the more so because such manure is not fibrous from litter, but may be spread finely and intimately mixed with the earth to which it is applied. Used in this way, it would probably be worth over 60 cents per load. Peat or muck, if it could be as thoroughly dried, which is nearly impossible, would doubtless be still more valuable. Coal ashes would be good to mix with manure compost, and would do no harm, and be a good absorbent. On account of its extreme dryness, it is excellent for sprinkling daily into the vaults of privies, destroying the odor, and if used in sufficiently large quantities, allowing the contents to be shovelled out with as little difficulty as sand or earth.

[For the Country Gentleman and Cultivator.]

HOME CULTURE OF TOBACCO.

I always have grown my own tobacco, and manufacture it to suit myself, and prefer it to the "boughten." For our own use, it is not requisite to grow it every year. I generally grow enough on a small patch in one year to last me and my wife, (who uses the pipe also,) four or five years; therefore we always have the article at hand, and are not under the necessity of sending "John" to the "store," every week for a little tobacco.

I have tried several varieties of Tobacco—the "Connecticut Seed leaf," "Cuba," &c., but I find what we call the "Ohio Improved" the best variety. It has a long, wide, thick heavy leaf; and when rightly "cured," it is a superior article. I have saved a quantity of the seed, and any friend who may desire it, by enclosing to me an envelope, already directed, and four or five *penny stamps* to pay the postage, and trouble of putting up the seed, I will enclose and send by mail, a paper of the seed.

Windsor, Ohio. L. NORRIS.

EDITORIAL CORRESPONDENCE.

Trip to Holmdel, N. J.—Monmouth County Farming—A South-Down Cross to Produce "Butcher's Lambs"—Four and Five Course Systems of Rotation—The Application of Marl—Mr. Taylor's Flock of South-Downs—This Breed Requires no Higher Feeding than Ordinary Sheep—System of Feeding here Adopted for Ewes, Lambs and Full Grown Bucks—Importance of Growing Roots, and Experiments as to their Value.

An excursion easily made, and really worth the making to any one interested in SOUTH DOWN SHEEP, is a visit at the farm of Mr. J. C. TAYLOR, Holmdel, N. J. Leaving New-York from the foot of Robinson street, in the steamboat for Keyport, it is only a stage ride of nine or ten miles farther—the whole distance being accomplished in less than four hours. The part of Monmouth county through which the traveller is carried, has made great progress in agricultural productiveness during the past twenty or thirty years. Much of its land is underlain with marl, the liberal use of which as a fertilizer has been the chief source of this improvement. With soils of a somewhat varied character, and a surface generally level, it produces good grain, grass and roots, and is well adapted for such live stock as will command the readiest sale in the great neighboring market of New-York. The farms vary in size very much, as in other parts of the country, running from sixty or eighty up to two or three hundred acres. Hay is baled and shipped to the city in very large quantities, and considerable Indian corn and wheat are also grown. But the potato is, proportionately, the specialty of this region among the crops of the farm; and the county of Monmouth produced nearly 800,000 bushels, according to the census of 1850,—a larger quantity, with but one exception, than any other single county in the United States.

Taking 150 acres as perhaps about the average size of the farms, we should probably find the system of management adopted pretty well represented in the following outline: Say a dozen steers will be purchased in autumn, and carried through the winter mostly upon coarse feed, such as cornstalks, etc., grazed and fattened through the summer, and then disposed of to make way for a new supply. From thirty to fifty sheep, more or less, according to the supply of feed and other considerations, will be purchased in early autumn from the droves that come along—many of them bred in New-York or Ohio—of the character of the ordinary sheep of these States, in which fine wool and a light carcass form the predominating element. Ewes are selected, and have been bought at about $3 per head for several seasons past; lambs are bred from them, and the whole are fattened and got ready for the butcher during the succeeding summer.

In farming upon this general system, Mr. TAYLOR about fifteen years ago came to the conclusion that "butcher's lambs" could be bred more profitably by the introduction of better blood on the part of the sire, to secure greater size and earlier maturity in the offspring. Obtaining some South-Downs in 1848, that had been prize takers at an American Institute show, he found this cross upon the common ewes fully as advantageous in both respects as had been anticipated; and similar requirements on the part of his neighbors gave him at once a ready local demand for all the pure South-Down lambs he could spare. Ram lambs, purchased by them at $15 each, were found more than to repay their cost in the increased value of these "butcher's lambs;" and a butcher in the vicinity has remarked that he had himself half-a-dollar's better profit upon dressing a South-Down lamb, from the greater proportion of meat, and the smaller proportion of offal, upon a given live weight, in comparison with other breeds of an equal or greater size.

To complete our brief glance at the Farming of this part of New-Jersey, before referring more particularly to Mr. TAYLOR'S present flock, it may be added that from six to seven dollars advance upon each ewe purchased in accordance with the above system, may be expected by the best farmers—say perhaps $4.50 for the lamb, $1 for advance on the ewe, and $1 for its wool. The best farmers feed the ewes for about three months, say with a half-pint daily of corn meal, together with their hay or cornstalks, but there are many who think good clover hay is quite sufficient without the meal. Some allow the lambs also to get at the meal, but the quantity they take when so young is not very great. They go out to grass, as soon as it furnishes a good bite, and are sold when the lambs are from 10 to 15 weeks old. The earliest lambs from a South-Down cross will dress perhaps 50 to 55 lbs., but those sold at full three months old or over, ought to reach about 70 lbs.

The rotation employed is Indian corn upon sod land, followed by potatoes, then by wheat, and then by grass. This covers four years, and is the nearest approach to the English four-course system with which I ever happen to have come in contact on this side the water. It has one objection, however: as most of the corn *is sold*, and most of the potatoes, and most of the wheat, and most of the hay—no land that did not lie on a marl-bed could well sustain so severe and constant drafts; there is little or no land in permanent pastures, and the quantity of stock kept is not such as to secure the manufacture of very large quantities of manure. It is therefore thought a *better way*, to let the land lie in grass *two years* instead of one—thus making a five course, instead of a four course system, certainly to the advantage of the land, and possibly not involving any present loss to the farmer. This change, suggested by Mr. TAYLOR, has a prototype, I may add, in the increasing favor with which the same course has apparently been regarded of late in England, it having been in many instances there adopted as a substitute for the old Norfolk system.

The marl obtained upon Mr. TAYLOR'S farm, and through that region, is got out in winter, exposed to the frost to secure its more ready pulverization, and spread on the land at the rate of a thousand or twelve hundred bushels per acre. This heavy dressing is with the view of adding to the permanent resources of the land; for a smaller one might produce an equal effect upon the crops immediately succeeding. It may be renewed in eight or ten years. The common system is to haul it on to the grass land in winter, preparatory to breaking up the sod for corn in spring; but Mr. TAYLOR is in favor of allowing the field to remain in grass during the year after the dressing is applied. The different qualities of marl found in different localities in New-Jersey, it may be remarked, are applied in quite different ways; it was mentioned for instance that only a hundred to a hundred and fifty bushels per acre is the ordinary application of the Squankum marl, which is more concentrated in character, and therefore pays for transportation to considerable distances along the canals, which could not be done at a profit with the marl dug about Holmdel.

Our space must limit these remarks upon Monmouth County Farming to a bare sketch, omitting much that

would be of interest, and which could be more easily gathered during a summer journey, than at the present season of the year. The chief object of the trip, as already intimated, was to see Mr. TAYLOR'S South-Downs; and, having given above the key to his first selection of this breed, together with facts which serve to illustrate very forcibly its practical value to the farmer, we may now go about among his yards and buildings to admire if we may, and criticize if we can, the animals they contain. There are few, however, who would care to enter into that minute comparison of one with another, and of the whole with other similar flocks here and abroad, which busied us so closely one day last week, and the general result of which is all that most readers will desire to obtain. We came from it, strengthened in the faith before entertained, and more than once expressed in the COUNTRY GENTLEMAN, that what is true of our best herds of Short-Horns, is equally true of our best South-Down flocks, namely, that *no farther importations from abroad* will be needed, if we rightly employ the means now within our power of maintaining and improving the stock we have heretofore purchased.

Mr. TAYLOR'S South-Down flock now includes about 75 breeding ewes, of which say 25, are imported; 16 ewe lambs, and 17 ram lambs. He has also six stock rams: four imported—"No. 89," which was purchased for Mr. T., as our readers remember, at JONAS WEBB'S great sale in 1861, for about $1,300; "Reserve," purchased from Mr. WEBB in 1860, and two yearling rams, purchased at the same time as "No. 89." The other two rams are called "Young Prize" and "Vigor," and are sons of the ram imported by Mr. T. in 1858, and called "World's Prize," from his having won the prize at the great international exhibition at Paris. "World's Prize," it may be added, was sold for $1,000 in 1859, to go to California; that year was a remarkably successful one for Mr. T., and among other shipments then made to the Pacific coast, he mentioned one lot of 14 head for which the round sum of $1,400 was paid him.

From the liberal outlay made by Mr. T., during the past seven or eight years, and especially in the determination shown by him for three years past, to secure the best he could obtain in England at whatever cost, I expected much, and yet was scarcely prepared to find so many evidences of a straight-forward, practical common sense manifested in his views and transactions, rather than of any wild enthusiasm on the one hand, or of mere "Yankee 'cuteness" on the other. Believing that he can breed more healthy and hardy lambs by an avoidance of higher feeding or warmer shelter than any humane man ought to provide for his animals, he keeps the flock in open yards with shedding attached, and states, I doubt not with the most entire truth, that South-Downs will keep in better order and even grow fat* upon *no greater allowance of food* than would be required to maintain an equal number of ordinary "natives." Believing that this improvement in mutton sheep is a matter to which far more general attention must be given in coming years, and that the South-Down supplies the best means of reaching that end, it is his design and desire to limit his sales so far as possible to males, or to let their services by the season, where this is preferred to a purchase—"Young Prize," as one instance among others, having been let for the season of 1861 for $80 to Mr. JOHN WORTH of Chester County, Pa., a well-known and careful breeder—since it is in this way that the flock can be made to produce the most general and lasting effect. Believing that, starting where British breeders at present stand, and where Mr. WEBB is leaving off, he can fully "hold his own" as regards the points of excellence peculiar to the South-Downs, his importations include representatives of different families, so that there need be no in-and-in breeding of near relatives, and he is watching with great care the results of combinations between the individuals of the flock, and the qualities developed by his young stock as they advance. Of the merits of "No. 89" and "Reserve," or of the other imported animals, I need not speak, but it would be wrong to pass by those bred upon the place without a single remark as to the evidence they afford of the success of Mr. TAYLOR'S efforts. We examined a pen of ten yearling ewes, all but one of them sired by "World's Prize," who proved himself very clever as a stock getter, imparting his close fleece, full chest, width of shoulders, spring of rib, and excellence behind, in a marked degree. The lambs by "Reserve" are promising well; there are 14 of them rams and 12 females, some of them reproducing admirably the deep chest, straightness of back and belly, and good hind quarters of the sire, and all of them very full and strong behind the shoulder, where he particularly excels.

In conclusion, Mr. TAYLOR does not believe, as a practical man, in *sheep-keeping without roots*, fully agreeing with our other leading breeders in the estimate he places upon their value. It is constantly a source of surprise to see that so little attention is paid to this subject by American farmers; and I think I have before published the response once made to me after a lecture in which I had referred to this subject, that "turnips contain ninety per cent. of water, which can be had cheaper out-doors, than to build a barn cellar to house it in." This was intended as a "knock-down argument," and presents an objection to root growing as compared with raising a crop of corn, perhaps as current as any other. Mr. TAYLOR once put three South-Down lambs, averaging a weight of nearly 90 pounds each, in a yard by themselves, and gave them for six weeks one pound clover hay and about 10 pounds white turnips, each, per day. They kept up their weight, neither gaining nor losing during that period; and as the common rule is about 2½ pounds good clover hay per day to a sheep weighing about 100 lbs., he considered the 10 lbs of turnips equal to about 1¼ of hay. Rutabagas were then given to the lambs, in the same quantity as the turnips had been, and with an equal weight of hay, for a fortnight, and they gained each two pounds a week. Farther experiments with sugar-beets and carrots agreed in result very nearly with the last, although of the three, the sugar-beet apparently laid on a little the most flesh. The details of these and other trials, had led Mr. TAYLOR to estimate five bushels of rutabagas as affording a nutritive equivalent about equal to one of Indian corn; and, as he can raise 600 bushels of the former upon an acre of land as easily as he can 50 bushels of the latter, he does not think it *pays* to neglect them. It should be added, however, that he objects to roots as feed for lambing ewes, until the lambs are say a fortnight old; but he "would not undertake to keep a flock of young and growing lambs without them."

Mr. TAYLOR'S usual system of feeding ewes has been about a bushel of roots to ten head, begun two weeks after lambing, with half a pint either of unground oats, or of corn meal to each—preferring the oats unless corn meal is relatively considerably cheaper. Previously to this time they receive no feed whatever but hay and cornstalks. With the buck lambs he begins in Nov., giving them at first only a very small quantity of oats, and increasing the quantity by degrees, until in February they may get a pound of oats each, and a pint of wheat bran, which is his highest feed at any time. The ewes are not fed at all during winter, because unless kept back then as much as possible, they may get too fat during the coming summer to breed successfully. As to the fecundity of South Downs, I learned on inquiry that from one-third to one-half the ewes in Mr. Taylor's flock bring twins—on one occasion I believe more than half of them having done so.

If my allotted space had not already been far exceeded, there are several other points upon which I should like to have briefly touched; and if my letter is anywhere less full and clear than might be desirable, I presume Mr. TAYLOR will kindly supply such additional information as may be requested.

L. H. T.

* Mr. Taylor states from careful observation, that his South-Down ram lambs will gain 3 pounds per week, where common ones, either rams or wethers, kept upon precisely the same allowance, would only gain a pound and a half.

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co. N. Y.---VI.

Gang Plows and Wheel Cultivators.

I have alluded, in a previous communication, to the use of gang plows in preparing the soil for wheat in this county, where most farmers prize it highly as an implement of great efficiency and utility. The best gang plows have steel mold-boards, which is a very important feature, as they not only draw easier for the team, but by presenting a smoother surface than cast iron, they will work in light soils without clogging, where the earth would not slip well on mold-boards of cast iron. They possess the same advantage that the steel plows *proper* do, over the ordinary cast iron plow.

In many localities, even in our own State, gang plows have been introduced for cross-plowing the soil, and have been rejected almost entirely, for the reason that the soil was so compact as to require deeper tillage than could be effected with the gang plows.

This is also true of the wheel cultivators, which were introduced very extensively in most of our wheat growing counties, and which were, in most instances, where the soil is of a clayey and stubborn character, thrown aside, and the common plow used in their stead.

But in Monroe county farmers rely upon gang plows and wheel cultivators, where the soil is light, friable and porous, almost as much as they do upon the common plow. But when we come to a clayey farm which has not been underdrained, and where agriculture is *retrogressive* instead of *pro*gressive, we find that wheel cultivators and gang plows have usually been rejected, on account of their inefficiency in cultivating such soils.

The wheel cultivators are so arranged, that they can be adjusted in a few seconds to run at any desired depth from one to six inches; and the gang plows are also adjustible, so as to run deep or shallow; but when the merits of the two implements are compared fairly, I think that good steel gang plows are much superior to a wheel cultivator, for the following reasons:

Fisrt, when both implements are drawn at the same depth, the gang plows, if they cut the same width of a cultivator, will require less force to draw them; and, secondly, they perform the work in a more thorough and efficient manner than the cultivators do; and, thirdly, new points can be attached to the plows at trifling expense, whereas the expense of keeping steel teeth of such cultivators in as good order as they should be, is far more expensive.

After an inch of the edge of steel teeth has been worn off, they will be very inefficient, and will require much more power to draw the implement, although most farmers will continue to use their steel teeth until they have been worn up to a complete stub; and, to appearance, they perceive no difference between the effectiveness of the two—the sharp and well formed teeth and those worn out.

Gang plows will cut every thing up in the form of roots of noxious weeds, and turn them neatly under; while cultivator teeth, unless they are in very good order, will allow most of such things to slide around their edges without cutting them off. Gang plows in that section of country are usually drawn by three horses abreast, or with a yoke of oxen and a horse forward of them.

Farm of R. P. Hubbard.

Having seen several very fine specimens of young horses of the Black Hawk Morgan breed, Mr. Isaac Bower proposed to accompany me to R. P. Hubbard's residence, who was the proprietor of the most beautiful black stallion, of the genuine Black Hawk Morgan breed, that I have ever met with. For beauty of form and symmetry, I have never seen his equal; and it would be exceedingly difficult for any person to point out the spot in him, that could, or ought to be improved, in order to render him a more beautiful animal than he now is. And in addition to his physical beauty, his perfect tractability and docility were most superior and admirable.

He was kept loose in a large box-stall; and when Mr. H. opened the door, he would, at the word, stand on his hind feet, or place his feet on the door-sill, or perform any other feats that he was bid, without a bridle on, which is a very uncommon occurrence, to manage a stallion with nothing but a small whip.

Mr. H. was unusually busy, as most working farmers are at particular times, for which reason our call was quite short.

His fields showed that they were pretty well cultivated; and judging from the abundance of good manure in his barn-yard, which was then being hauled out on oat-stubble, preparatory for a crop of wheat, and judging also from the heavy crop of peas which he was then raking, his system of farm management is by no means retrogressive, which cannot be affirmed of every farmer in that vicinity. I stretched up some of his pea vines, which were well filled with pods, which were as high as my head —5 feet and 10 inches.

His buildings were all in a good condition; and his neat and commodious corn-house and piggery deserves more than a passing notice. The piggery is in the basement of the building, and in one corner is a large cauldron set in brick-work, and a few feet from it is a large box, with sheet-iron nailed on its bottom, which is supported by two walls of brick, with a fire-place between them, for *steaming* potatoes, pumpkins, &c., for his swine, of which he had a lot of very fine ones.

The partition between the feed-room and the apartment where the swine are kept, consists of a large flap, or kind of door, suspended by hinges to a beam directly over the feeding trough. When they are to be fed, the flap is thrust *towards* the swine, and fastened to that side of the trough until the food has been put in it, when the flap is brought to the other side of the trough, and fastened, when the animals can come to their food.

This is, I think, the most convenient mode of erecting a trough for swine, because it not only is so very convenient when distributing their feed, but also when cleaning the trough, which can be done without entering the apartment of the swine.

Wind-Mills.

At a short distance from Mr. Hubbard's residence, we discovered frame work, doors and ceiling, on the top of a barn, which we found to be a wind-mill for pumping water in the barn-yard for stock, which is received in a large water trough until it is full, when the water returns into the well as fast as it was pumped up.

As its arrangement disclosed some novel features, I will attempt to convey an imperfect idea of it.

The wheel was made in an upright position, very much like the fans or blowers of a fanning mill, if they were placed erect, instead of horizontally as they work in a fanning mill. The circle described by the wheel, was about six feet in diameter; and the wings were six feet long—vertically—and about eighteen inches wide, and instead of being straight from side to side, they had been warped, and the wind was allowed to strike the concave side of each wing. As the opposite side of each wing was convex, they would meet with less resistance than if they were entirely flat, or were not warped. There were as many as six or eight wings. This wheel was surrounded with frame work and boarded up on all sides, except where there were doors, which were opened to admit the wind, when it was blowing from any direction; or they could all be closed, when it was desirable to have the wheel stand still. More than this, the outside frame and ceiling was built with its sides diverging from every door, for the purpose of directing a greater amount of wind into each door, than would enter were the sides only even with the door.

There was no little ingenuity displayed in its construction; and it was said to subserve a very good purpose. Of course it is necessary to open other doors when the wind changes, and when it blows furiously, a door may be open just enough to keep it in slow motion.

Our next call was at the residence of Mr. Reed, who was absent; but we had the pleasure of seeing a very nice farm and some 10 or 12 most capital bullocks, which would weigh, probably, from fifteen to twenty hundred pounds each. Indian corn and pastures showed that the manure of the farm was not all allowed to be wasted.

Among his horses, we discovered a pair of twin mule colts, of good size, and so nearly alike that no difference could be perceived between them, in color nor in form.

Tompkins Ditcher.

Having frequently heard that a Mr. Tompkins of Clifton, had recently invented a ditcher, with which one horse would cut eight rods per hour, we went to see it. He has expended about eight hundred dollars, he said, in bringing it to its present state of perfection.

It is a very complicated, clock-work-like implement; and it would not be practicable to give very much of an idea of it, without drawings of different parts of it. It is sufficient to say, however, that it is a *self-propeller*. The machine is supported on four wheels, with two large drive wheels, nearly five feet in diameter, and rims six inches broad, with the peripheries well ribbed, to prevent their slipping. Between these wheels is an upright iron shaft, of four-inch-round iron, to which the lever is attached. The horse, or two horses, when hitched to the lever, travel around the machine, and cross the ditch in rear of the machine over a plank, which covers the ditch and is drawn along with the machine. There are several systems of cog or toothed wheels, so connected with the shaft and the lever and the drive wheels, that, at every circuit of the horse, the entire machine is propelled forward from one to two inches.

The digging is performed by means of a system of scrapers or hoes attached to an endless chain arrangement, which can be elevated or depressed to any desired depth. The forward movement of the machine presses these scrapers into the earth, which they bring up and throw behind them, and it is then carried to either side of the ditch, which is about six inches wide.

I would not pen a word to dishearten the persevering inventor; but for those who may be anxious to know more of its efficiency I may be allowed to say that for ditching, where there are no small stone, it will probably subserve a good purpose; but its complexity and expense will be a great hinderance to its general introduction. The more simple any machine is, the less liable it is to become deranged in any of its parts, and as a general rule, for such purposes as ditching, the greater will be its effectiveness.

The principle which is disclosed in the construction of this machine is a good one, and I am quite disposed to think that by dispensing with a good portion of the clock-work gearing, and by substituting a worm and pinion for obtaining a slow motion, and by dispensing with three-fourths of the dirt scrapers on the endless chain, or dirt carrier, and by attaching a few diggers to the endless chain for digging up the earth, it would operate far more effectively than so many small scrapers.

Our intention was, when in this vicinity, to call on Gen. Harmon, who has experimented so extensively in the cultivation of wheat, but the day was too far spent, and so we returned to North Chili, passing many fine and, to all appearance, well cultivated farms, and a great number of neat and commodious residences, with yards very tastefully arranged, with surroundings in abundance to render a farmer's home attractive and cheerful, and a still greater number of good barns and outbuildings, all of which appeared in good order.

Here we pass a large field of Marrowfat beans, which look fine, and promise to be a very remunerating crop. Judging from the appearance of the farm, and the location of some of the new outbuildings, the plans for a yard and residence are still in embryo, and if appearances are not deceitful, the proprietor is a *progressive* farmer.

Away off in the distance my friend Davis pointed out a very elegant barn, which received the first premium from the New-York State Ag. Society. A little farther along we passed a very spacious and neatly constructed barn, painted white, belonging to the farm of Mr. Harmon.

In that vicinity I was informed that there are a large number of good cattle raised, and most of the good farms showed that their manure is judiciously applied to the soil, although many good farmers who *aim* to save all their manure lose a large portion of it by a yard improperly constructed.

Steaming Food for Stock.

My attention was directed to Prindle's agricultural caldron and steamer, for which my friend Davis was agent, who informed me that a good number of farmers in that vicinity were intending to give them a fair trial during the approaching winter in steaming food for their neat cattle and other stock.

These caldrons and steamers are manufactured in Rochester. It cannot be denied that they make a very nice apparatus for steaming food with; but they are quite too expensive for farmers of ordinary means. But very few farmers can, or will afford to pay $30.00 or $40.00 for an apparatus to steam provender with, for neat cattle or for horses. Those who have really made up their minds that it is a paying operation to steam straw, hay and cornstalks, can construct a good and convenient apparatus for this purpose, for five or six dollars; and even then, a man would need to keep more stock than most farmers are accustomed to keep, providing he was under the necessity of employing a man to do his chores.

I am quite inclined to believe that it would be far wiser and better policy for farmers to take more pains in erecting good barns and sheds and stables, and to take more pains in securing their hay and straw and stalks, and endeavor to have them in a more edible condition for their stock, than it is to attempt to render poor hay, poor straw, or poor stalks more palatable and nutritious by steaming them. If there is but little nutriment in hay or straw—if it be weather-beaten and mouldy, steaming may improve its palatability a little; but it will not make good feed of it. S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

POUDRETTE FACTORY.

Editors of Co. Gentleman—Three years ago I built a vault under my privy, 6 by 8 feet and 5 feet deep, by bricking up the sides, and covering the bottom, and a foot or more of the sides with Hydraulic cement, and in this, after clearing in the spring, I throw a horse load of muck, that is fine and dry, and from time to time we throw in more muck, so that when we clear it out, there is some over a cord of manure.

We are careful to empty all the vessels into the vault. When we empty the vault, we remove the manure to a tobacco shed, and mix in as we deposit the mass, some 3 barrels of ashes. Before using it we generally throw it over twice or three times.

It is generally by this time so fermented as to be fine, and most inodorous, so much so that a man can take it in his hands to apply it without offence. We have always used it in the hill for tobacco, instead of superphosphate, and have thought the effect better upon the young plants than anything that we have ever used.

There is only one thing in regard to the composting that troubles us, and that is, it seems we lose a large quantity of ammonia whilst the mass is fermenting. Do I need to apply plaster, and if so how much and when?

I have thought that the Poudrette was of as much value to me, as from 15 to 20 dollars worth of the best superphosphate would have been. J. M. C.

To prevent loss by fermentation, use less ashes, or more muck or both—and if necessary, add thin layers of dry loam or clay. The thinner and more frequent the layers of the muck, the more perfect will be the intermixture, and hand labor will be lessened. The mode of management described by our correspondent is excellent—we need hardly add that it is of great importance to have the muck very well dried, in order that its absorbent powers may be brought into full action.

New-York State Agricultural Society.

Pursuant to previous notice the Society met in the Assembly chamber at noon on the 12th ult.—the President, Mr. GEO. GEDDES, in the chair. Hon. MARSHALL P. WILDER, Ex-President of the United States Ag. Society having been invited to a seat by the side of the chair, briefly acknowledged the courtesy. The Treasurer's Report was then read, of which the following figures present a brief abstract:—

REPORT OF LUTHER H. TUCKER, TREASURER.

RECEIPTS.

Cash on hand from last account,	$1,792.71
Memberships at Annual Meeting,	48.00
Life Memberships during the year,	70.00
State Appropriation,	700.00
do. do. for Dr. Fitch,	1,000.00
Interest,	11.12
Local Committee at Watertown,	800.00
Receipts at Watertown Fair, including $106 for Life Memberships,	7,900.40
	$12,322.23

DISBURSEMENTS.

Premiums at Winter Meeting,	$576.00	
Expenses at do.	43.54	
Premiums and Expenses of Previous Fairs,	122.50	
Salaries and Travelling Expenses,	2,865.13	
Salary of Dr. Fitch,	1,000.00	
Incidental Expenses,	126.93	
Postages,	177.67	
Library and Museum Expenses,	82.29	
Printing, Stationary, &c.,	385.28	
Premiums, &c., Watertown Fair,	4,722.09	
Expenses Watertown Fair, for Gate-Keepers, Day and Night Watch, Police, Laborers, Clerks in Offices, &c.,	1,122.31	
For Superintendents and all other Fair Expenses,	955.80	
	$12,179.54	
Cash on hand to new account,	142.69	
		$12,322.23

On motion of Mr. J. STANTON GOULD, a vote of acceptance was taken, when Mr. B. P. JOHNSON, Corresponding Secretary, proceeded to read the Report of the Executive Committee for the year just concluded.

After a few brief and appropriate remarks upon the condition of the country as exerting an influence upon the agriculture of the State, this Report refers in detail to the events in its progress which have occurred during the past twelve months; the deaths of several of the former officers of the Society; the labors of Dr. FITCH, its Entomologist; the character and success of its last Fair, &c., &c. The increased importance of wool growing, and the recent efforts to perfect the processes of flax manufacturing, under the scarcity of cotton, are mentioned; the appearance of the pleuro-pneumonia in this vicinity, and its apparent extinction in the course of the season, are alluded to; considerable space is devoted to the important subject of agricultural statistics, and the hope expressed that the legislature will take favorable action upon the bill which has been introduced for their collection throughout the State.

The usual nominating committee of three from each judicial district was appointed, upon whose report through their chairman, Mr. KELLY, the following officers were duly elected:—

PRESIDENT.

EZRA CORNELL of Tompkins County

VICE-PRESIDENTS.

1. Thomas H. Faile of New-York.
2. Samuel Thorne of Duchess.
3. Herman Wendell of Albany.
4. Oscar Granger of Saratoga.
5. Solon D. Hungerford of Jefferson.
6. Thomas I. Chatfield of Tioga.
7. Patrick Barry of Monroe.
8. Samuel W. Johnson, of Cattaraugus.

COR. SECRETARY.

Benjamin P. Johnson of Albany.

REC. SECRETARY.

Erastus Corning, Jr., of Albany.

TREASURER.

Luther H. Tucker of Albany.

EXECUTIVE COMMITTEE.

T. C. Peters of Genesee; E. Sherrill of Ontario; A. Hubbell of Oneida; C. I. Hayes of Otsego; W. Newcomb of Rensselaer.

A recess was then taken until 7 P. M., when, after the presentation of some resolutions by Mr. P. M. Wetmore of New-York, which were laid on the table for discussion by the Society at their meeting on Thursday, a valuable letter was read from Dr. FITCH, who was unfortunately prevented by illness from being present in person. The president introduced Hon. HENRY S. RANDALL of Cortland, who was present at his request to read a paper upon sheep raising and wool growing. Mr. R. then occupied upwards of an hour in a summary review, particularly of the Fine Wooled Sheep of the country, their introduction, character and successful improvement. This paper included several extended tables, and much information gathered from the previous writings of the author and others, as well as by his recent observations in this and other States, and by correspondence with our best sheep breeders. Biassed strongly in favor of the fine wooled breeds, few advocates of that class of sheep could have made out a stronger argument in its favor.

At the conclusion of Mr. Randall's essay, Mr. Kelly, seconded by Mr. Peters, moved a vote of thanks and that a copy of the paper be requested for the Transactions of the Society. Adopted.

Thursday the usual exhibition of Grains, Dairy Products and Fruits, together with a number of improved Implements, were on view at the Society's rooms; and the usual discussions were conducted in the Lecture Room of the Society, the President, Mr. Geddes, in the chair, on Thursday, when the attendance was quite good.

At the evening session the Reports of Committees were read by the Secretary, declaring the award of premiums for Farms, Crops, Seeds, Butter, Cheese, &c.

Mr. GEDDES, the retiring President, then delivered his valedictory address, which was devoted to a review of the progress of Agriculture during the twenty-one years that have now elapsed since the Society first entered upon its present career of active usefulness. Mr. G.'s remarks will be issued at once in pamphlet form. Mr. GEDDES then introduced his successor, Mr. CORNELL, who followed in a brief and appropriate acknowledgment for the honor conferred, and expressive of his determination to put forth every effort to render the term of his office, with the assistance of his coadjutors, no less successful than the previous career of the Society under the guidance of the eminent men who had preceded him in the same responsible position.

At the conclusion of Mr. CORNELL's remarks, and after a vote of thanks, on motion of Mr. HUNTINGTON, to the speakers for the addresses delivered, a resolution was passed upon motion of Mr. JOHNSON, commending to the favorable notice of the Legislature, the bill now before the House for the collection of Agricultural Statistics; and, upon motion of Hon. WM. KELLY, that, in view of the great value to the agricultural community of Dr. FITCH'S Entomological investigations, and especially of those in which he has been recently and is now engaged, the continuation of the present annual donation by the State to support these investigations, should not be overlooked or omitted in the appropriations of the present winter. A desultory discussion followed, in the course of which Mr. CONGER presented to the Society several pamphlets explaining a new process of un branning wheat before grinding for flour, which we shall hereafter refer to more particularly.

The Society then adjourned, after a pleasant, harmonious and useful session, which, if not so fully attended as has sometimes been the case, had drawn together a fair representation from various parts of the State, including many of the oldest and warmest supporters of the Society's operations.

[For the Country Gentleman and Cultivator.]

EXPERIMENTS IN POTATO CULTURE.

Messrs. Editors—In answer to your call for *facts* in regard to the proper time for digging potatoes to avoid the potato disease, I will add my mite by giving you the result of my experiments with the *white* Mercer potato the past season.

I planted six acres with them; the land was a sandy loam, that produced the year previous 160 bushels of ears of corn per acre, by a liberal application of barnyard manure on the sod, and 200 pounds of guano per acre in the hill.

Plot No. 1.—One acre, planted April 8th, with seed cut from large potatoes, 13½ bushels, in furrows 2½ feet apart, manured in the furrows with 140 carman loads of New-York stable manure and 575 pounds of Peruvian guano, the seed dropped upon both and covered with the plow. Dug Aug. 12th. All sound—yield, 236 bushels.

Plot No. 2.—One acre, planted April 9th, seed the same kind and quantity, 140 loads stable manure, and guano in all but eight rows, at the rate of 366 pounds per acre; four of the eight rows with wood ashes spread upon the manure at the rate of 200 bushels per acre. Dug Aug. 19th; all sound—yield, 248 bushels.

Plot No. 3.—One acre, planted April 15, seed from large potatoes, 14 bushels, 100 loads stable manure and 350 pounds of guano. Dug Aug. 22d; all sound—yield, 199 bushels.

Plot No. 4.—Three-quarters of an acre, planted April 19th, seed cut from medium sized potatoes, at the rate of 14½ bushels; stable manure at the rate of 100 loads, and guano at the rate of 400 pounds. Dug Aug. 28th; very few diseased—yield, 117 bushels, or at the rate per acre of 156 bushels.

Plot No. 5.—One acre, planted April 23d, seed from medium sized potatoes, 14½ bushels; 110 loads of stable manure and 350 pounds of guano. Dug Aug. 30th; very few diseased—yield, 137 bushels.

Plot No. 6.—One acre, planted April 25th, seed from large potatoes, 14 bushels; coarse hog-pen and barnyard manure, and 500 pounds guano. Dug Aug. 26th; very few diseased—yield, 127 bushels.

Plot No. 7.—One-quarter of an acre, planted June 4th, manured with guano alone. Dug Oct. 14, yield very light, quite two-thirds of the potatoes diseased; the remaining portion were considered nearly worthless, and were fed to the hogs.

In plots Nos. 1, 2 and 3, the first planted and earliest dug, there were no diseased potatoes.

In plots Nos. 4, 5 and 6, not to exceed half a bushel diseased, and those were found on the ends of the rows, bruised by the feet of the horses.

Plot No. 7, the last planted, was nearly an entire loss.

The difference in yield between Nos. 2 and 3 was caused by the difference in the quantity of manure used. Between Nos. 3 and 4, by the difference in the quality of the seed; where seed from large potatoes were used but 1-12th of the product were small potatoes; from the medium size about one-sixth of the product were small. Between Nos. 4 and 5, by the exposure of the seed in No. 5 to the heat of the sun some two or three hours before covering, which prevented about one-third of it from sprouting. Between No. 6 and those preceding, by the inferior quality of the manure. No benefit was derived last season from the use of guano or ashes, probably caused by the drouth in summer.

The test was in plot No. 2; four rows were left with stable manure alone, four more on the one side of them with the addition of wood ashes, and four on the other side of them with the addition of guano. There was no difference whatever in the quality or yield of the three parcels.

This differs greatly from the result of my experiment with guano in 1860, as noticed in the Country Gentleman of Dec. 13th of that year; the value of the increase to the crop that year by the addition of guano was more than five times the extra expense.

In another respect the two experiments differ; that year there was no difference in the yield or size of the potatoes raised from seed cut from large or medium sized potatoes; last year they differed in both size and yield.

In other respects the two experiments *do not* differ, and confirm me in the belief that I expressed in the former article referred to, that no *amount* or *kind* of manure would cause the potato to become diseased, and that the sure preventive is to plant as soon as possible in the spring, with early ripening kinds, and dig them as soon as they are ripe. If every farmer would adopt that plan, I am satisfied that we should soon hear no more of the *potato rot*.

That portion of the crop that was retained, was put in the cellar on the 30th day of August; they remain perfectly sound, not a single decayed potato having been discovered.

The greater portion of the marketable potatoes were sent directly from the field to New-York, and disposed of at $2.12½ per barrel.

Notwithstanding the drouth of the past summer, which shortened the crop of potatoes very much on Long Island, this crop was remunerative, paying the cost of manure, of seed, and of all labor bestowed upon it, estimating each day's labor of man or horse at 75 cents.

In addition to which one-half of the cost of the manure is justly chargeable to the succeeding wheat crop.

Matinecock, Oyster Bay, L. I. GEORGE R. UNDERHILL.

[For the Country Gentleman and Cultivator.]

Notes on Morris County Farming, N. J.

This part of Jersey is hilly and mountainous, abounding in valleys between, furnishing rich farms. While on a recent visit to Rockaway in this County, I was struck with the number of substantial stone walls, some of which are 4 feet wide at the bottom, and 3 feet at top. Stones are plenty in this part of the county, and much attention is paid to mining and carting ore. Some of the farms indicate thrift, but carting has engaged too much of the attention of the farmers for profitable culture of their farms, notwithstanding they have a good home market for almost everything a farm can produce, as the mines of iron require many laborers.

Mr. George Richards has been having a ditch some 4 to 6 rods long, and in the deepest place some 15 feet deep, to drain an old pond hole. He thinks of getting some 1500 loads of the first quality of muck, and as the canal runs near by, he buys his lime and has it mixed on the bank of the canal. I think he will see the effects soon.

Mr. A. Riggs of Drakeville, is an example of what industry and perseverance can do. He commenced life on the Morris canal, and after saving money enough, he bought a store, and has gradually bought land until he now has several hundred acres. Last year he sowed 80 bushels of buckwheat, and his crop of Spring wheat for 1860 was 600 bushels. He sowed superphosphate of lime with his wheat. Much of his land is so level as to be incapable of draining, and he, to get his spring crops in early, plows in the fall. He has bought considerable lots of woodland, employing many hands during the winter months. He thinks farming pays.

Mr. J. H. Crammer of this place, commenced life in New-York State, working by the month. He commenced saving, and soon raised enough to buy a farm by leaving part on bond and mortgage. He repaired his buildings, enriched his land, raised more grain than many farmers having twice the number of acres, and has now sold and bought a larger farm. He thinks farming pays. It will not be amiss to state that he had a prudent wife and no family; that makes a difference. Farming must be done economically and have good management, to make it pay; still industry and perseverance will accomplish much, and farmers need a good share of each to succeed.

J. T. H.

[For the Country Gentleman and Cultivator.]

COTTON GROWING IN THE NORTH.

BY A SOUTHERN TRAVELLER.

It would not be comfortable now to visit the south on any expedition for information concerning the peculiar products of their country; but we may go back to our old minutes and glean some useful hints from observations made in travels among them when we lived as brethren, looking to the same flag for protection, and prospering under the same guarantees of peace which it everywhere carried with it.

The question does not come up "whether we can grow cotton in the north?" That has been done for the last fifty years with good success. When the hardy pioneers of southern Illinois, and a small portion of Iowa, first removed from their southern homes, they found the climate congenial for cotton growing, and continued its cultivation for a long time. It has latterly been discontinued, more from economic than any other reasons. It has not paid at the low market rates. But it may be remarked in passing that there is nothing in the soil which stands in the way of success. The soil is rich enough in the elements necessary for perfecting the plant. The low lands along the southern rivers and branches are not more fertile than the American bottoms of southwestern Illinois, nor the bottom lands of many of the lesser streams. The wheat lands of southern Illinois are far richer than the upland cotton fields of Alabama. Their tillage is better, and the men who cultivate them work with a will and an intelligence which pledge victory before hand.

The best cotton lands of Tennessee are not unlike the wheat lands of Macoupin, Shelby, and other counties of Egypt. In northern Mississippi there is a superabundance of sand, which gives sure returns for a few years, yet after that the soil feels the great exhaustion of the crop, and becomes worthless. Already there are large tracts of land in that section "turned out to rest," as the planters have it, every few years, and they lie for one, two or three successive years. Or, as is now common, wholly abandoned to grow up with weeds and shrubby trees, like the abandoned tobacco lands of old Virginia. This is the case even in Fayette county, Tennessee, the largest slaveholding county in or out of the Union, and in which the lands are proverbially strong. It also holds good in the neighborhood of Gen. Jackson's farm in northern Alabama, (a farm that he possessed after drlving out the Indians.) The lands here are of a reddish or a deep chocolate color. There are no better uplands by nature on the continent, and none that have endured bad culture better. Yet twenty years of "cotton and no rest" have overdone them. Now they are taking their rest.

The planters have seen and lamented this exhaustion of their soil, and during the times when wheat was worth $1.50, $2.00 to $2.50 per bushel, as in 1856, they commenced growing a crop of wheat every two or three years. This was to "*rest their lands,*" as they said. No grass seed was used, or but very little. They thought it killed out by the hot summer suns. Yet I do remember of seeing a few very fine patches of red clover, and am satisfied that some similar alternation of crops will be found necessary in Illinois to preserve the fertility of our cotton growing lands.

The cotton plant requires deep and thorough cultivation and a long season of fine growing weather, exempt from frosts.

It must be started as early in the spring as possible, consistent with its safety from frosts—tended constantly during the season to check the rampant growth of weeds, and the cotton gathered as soon and as fast as the balls open. Whatever means would favor early corn planting would facilitate early cotton planting. Therefore the ground should be prepared in the autumn previously.

Excessive wet and cold weather is very unfavorable; hence the trench plow should be used, to deepen the soil stirred, and permit the surplus water to settle away from the roots. We would add the subsoil plow in the same furrow, but it is scarcely worth while to talk about that on any large scale in a State where subsoil plows are not used. If there are any wet, springy places in the field, they should be underdrained. Underdrianing the whole field would be useful where practicable.

From these general remarks let us descend more to the detail.

The first important step is *selecting the field.* A rich alluvial or loamy soil is the best. As it will be necessary to guard against frosts, and to bring the plant to maturity within that of late spring and early autumn, an admixture of sand would contribute to a rapid growth and make success surer. In the selection of a field avoid one that is known, from any reason, to be a *frosty* spot. It matters not from what causes these objections might arise, whether cold, wet, springy soil, exposure to the drafts of cold air, or the settling in of chilled vapor from frosty currents. On the other hand choose a deep, warm, quick, mellow soil, from which, or through which, the surface water flows rapidly. Select a field known for its freedom from frosts, let it have a southerly aspect and a moderate elevation.

PLANTING.—We cannot fix a day when cotton planting should commence. The time will vary with every degree of latitude and with every neighborhood. It should be planted as early as it can be and not be liable to exposure of frost. North of the Ohio river planting should take place in the first and second weeks of May, varying, of course, with the season. In the south planting commences in March, and the latest ends in June. A slight frost withers the leaves like buckwheat, and utterly destroys the life of the plant. The plowed ground is usually thrown up in ridges, by turning two furrows together. The distance of ridges apart varies from three to four feet. The seed is dropped in drills; a large quantity is used, and afterwards thinned out at the first and second weeding to 8 or 12 inches apart in the rows. There is nothing essentially different in the cultivation of cotton from that of corn. The points to be observed are keeping the weeds in subjection, and the ground well stirred constantly from the time the plant has made its appearance until the branches obstruct the passage of the mule, or the flowers are in full bloom.

The picking is simply performed. As it must be done as soon as the balls open, and as they mature irregularly, the pickers must go through the "patch" several times. They gather the cotton dry, and deposit it in a safe place till the ginning commences.

As the labor which follows is purely mechanical, we will leave that work to those who may choose to purchase gins and undertake the business as a distinct branch of manufacture. The price of a gin depends on the number of "saws" it contains, and varying from something less than $75 to $275 each. They are prepared with pullies for belts, and may be driven by horse power used for threshers, or by any other mode desired.

☞ A "New-Jersey Farmer" writes us in a recent letter that the farmers of that State are beginning to ascertain that after its first cost, the expense of keeping good stock is little or no greater than that of keeping "scalywags." He refers to the Advertising pages of the COUNTRY GENTLEMAN as forming an interesting and exceedingly useful directory to those wishing to purchase, and a valuable means of disseminating improvement. He speaks very highly of Mr. J. C. TAYLOR'S recent South-Down importations, but not more highly than they doubtless fully merit. He also mentions very favorably the flock owned by Mr. J. MCCAIN, who has bred his South-Down ewes to the rams of Mr. Taylor, and who has also valuable Cotswolds and Leicesters derived from leading Canada flocks. Mr. McCain also breeds Essex and Suffolk pigs.

— We may add to the foregoing, that we have heard of several recent sales of Live Stock effected through Advertisements in the COUNTRY GENTLEMAN.

[For the Country Gentleman and Cultivator.]

NORTHERN OR PEA-VINE CLOVER.

L. Tucker & Son—I see an inquiry in the Co. Gent. of Jan. 2, page 16, about clover; and, without attempting to answer that inquiry, will tell my experience with the Northern or Pea-vine Clover, and can say for myself it is the right kind.

In the spring of 1860, I procured from Wm. Thorburn of your city, a bushel of the China Tea Spring Wheat, for which I paid $2.25, and if I recollect right 16 lbs. of the Pea-vine clover seed. This I sowed on about two acres, (too thin,) which came up and looked much as other clover till last spring; then it was later starting than the other, but when it got fairly started, it grew wonderfully, and when I cut it, it was down, but not like the other clover when it gets down, but it was all down and twisted to the "four winds;" still it was kind of propped up, so that it was not down flat on the ground. I had two hands mowing about a day and a half, and they got along so slowly, that I quit till we could get up what was cut; then went to hauling, and when it was forked up, (for raking was useless,) of all the crops of hay I ever saw, that took the lead, and we hauled eight large two-horse wagon loads that were loads, for it was long and stuck together so it would hang nearly the length of a winrow, and I am satisfied there was not less than five or six tons (but I have forgotten the rule for measuring hay in the mow) off of one and one-fourth acres.

I measured some stalks that were five feet and nine inches long, and well branched. Some no doubt will say, well it is coarse hay, and so it is, but I find my horses eat it very well; indeed, I think it is better than a large growth of the other variety, for the stalk is but little larger and is hollow and not near so hard. My horses eat it up very well, and do not waste one bit of it. I have been feeding four horses all fall and winter so far, from the product of the one and one-fourth acres, and am not near the bottom yet; so I think it will be cheaper to raise hay that way than to let the poor horses run out through the inclement season to get their living from the wheat fields, fence corners, &c., as some do, and then when solicited to subscribe for an agricultural paper say, "Oh no; I can't do now near so well as I know, and such or such an one has been sadly humbugged or misled by the teachings of such papers. I don't want anything to do with them"—but now would be glad to get seed of my clover, which I obtained a knowledge of through the Co. Gent. Have taken that paper now seven years, and would not take ten times the cost of it for this one item of information.

I saved the remaining three-fourths of an acre for seed, and would be glad if I had as much more. I intend to stock my farm with it. It will certainly be the cheapest manure we can apply; beside it looks better to grow clover four or five feet high than as many inches, and it is much more pleasant to get four tons of hay from an acre than to go over five or six acres for the same amount; and by saving the usual number of acres for meadow, we can let half of them run, which would, if turned under by a good plow, make a capital prospect for wheat, and be as good as a deal of hard work hauling out of manure.

Mine was sowed mostly on good ground, but a part was thin—one bank that would not, I suppose, grow the other clover more than six or eight inches high, made this from two to three feet, and very nice feed. It branches remarkably, and so makes a great many heads and leaves. If, as has been said, it does not heave or pull out by frost, I shall think it one of our very best crops—the best introduced hereabouts lately. My experience with it is only one season, but saw no signs of heaving out of the ground last spring.

I also think well of the China Tea wheat. We find it makes a very fine flour and bread.

Sugar Grove Nurseries, Barnesville, O. JAMES EDGERTON.

[For the Country Gentleman and Cultivator.]

CORN CULTURE---DRILLS vs. HILLS.

Messrs. Editors—Reading in the Co. Gent. of Dec. 19, p. 394, "Tape Line's" article in reference to corn in hills or drills, set me thinking upon that subject, and having had corn planted in both ways this season, thought I would look over my accounts, &c., and give my experience through the columns of the Co. Gent. "Tape Line" says that "J. L. R. confounds the question of whether corn will ear better, or yield the most, when planted in hills or drills." In my estimation the latter is the main question, and to raise corn, not fodder, is the object of the generality of farmers when planting it. The *better* piece for corn was planted with the drill upon the 3d and 4th days of May; tended with the common five-tooth cultivator and shovel-plow, being hoed twice and thinned out at the last (24th to 28th of June,) to not less than eight inches. The piece planted in hills was much poorer soil, planted upon the 21st and 22d of May, four spears to a hill; tended same as the other, costing about $1 75 less per acre than that in drills, not counting cutting and husking.

Upon measurement I found that it required, (taking an average of several bushels,) 115 ears of the drilled and 83 of that planted in hills, to make a bushel, or about one-third less. Both were sorted at husking.

Now every farmer knows that it takes just as long to husk a small ear as a large one; consequently every bushel of the drilled cost one-third more to husk than if the ears had been the same size as the hilled; and that in hills is a much better quality of corn, and where not destroyed by cut-worm, yielded more bushels per acre.

"Tape Line's" theory in regard to the roots seems as though it ought to be correct; but will it agree with the practice of those who have tried both systems *thoroughly?* I presume a good many of your readers would like to hear from some such person upon that subject; this being my first season, I am literally a Young Farmer.

Huron Co., Ohio, Jan. 11, 1862.

[For the Country Gentleman and Cultivator.]

CUTTING SWAMP BUSHES, &c.

Perusing in your last paper the communication of Mr. Gove, who says he is 75 years old, in which he states that the bushes should be cut down on "the old of the moon in August, when the sign is in the heart," which I presume few could peruse without a smile at this new "*moonshine*" story. I desire to say a few words on the subject. This is not a question of date, or of the moon's changes, but it is a question with which the sun has something to do. What is the object intended? It is to deprive the roots of brush as far as possible, of the nutriment (sap) which is requisite for its development of new shoots. The period to be selected for the operation of cutting off bushes should thererefore be that at which the sun's heat has most fully developed the growth, and when there is an apparent cessation in the formation of new wood. This period every one can decide upon for himself by observation. At this time there must necessarily be more of the sap in the branches than at any other, and by cutting off the bushes close to the ground, the root can receive no return of the sap that has been elaborated, and is so weakened as to be incapacitated to send forth any but very feeble shoots; perhaps none at all. Wm. R. Prince. *Flushing, N. Y.*

Good Crop of Wheat.—Mr. Wm. Woodburn of Cumberland County, Pa., writes to the Country Gentleman, that he harvested from 16 acres and 150 perches land, last year, 527 bushels of wheat by measure, or 542 by weight. The land was a clover fallow, and the wheat, the old Mediterranean. The certificates of surveyor and thrasher were furnished to the County Ag. Society. Such a yield should, as Mr. W. says, encourage farmers to greater efforts to secure good crops.

[For the Country Gentleman and Cultivator.]

How to Grow a Permanent Osage Hedge.

LUTHER TUCKER & SON—In compliance with your request, and for the information of others, I now proceed to give a minute description of my experience and mode of planting and cultivation of the osage orange as a fence. I give the preference to plants one year old. In trying to raise them from the seed I have been unsuccessful. I would rather leave that matter to the nurserymen.

SETTING THE HEDGE.—For this purpose the ground should be broken up to the depth of from 12 to 14 inches, according to the quality of the soil. The space broken up at least 10 feet wide, and that with the plow, leaving the open furrow where the fence has to be set. If there is any thin soil in the row, it should be well manured. It should not only be plowed, but subsoiled, harrowed, and thoroughly prepared. The land again to be plowed gathered into the open furrow—also made smooth with a rake. The hedge then to be set in the centre, which would leave five feet to be cultivated on each side. When a hedge is to be set along an old fence row, it is much better to have the fence removed the year previous, and the ground broken up and cultivated. It would then be in a better condition to receive the hedge. After the ground has been fully prepared, it is necessary to stake off the row and draw a line to work by. The holes to be made to insert the plants, to be made with a steel dibble, 12 inches in length, and 2½ or 3 inches in diameter at the top, with a socket in which to insert a handle 2 feet long, to make the holes, which should be 6 inches apart. The plants then to be put into the holes about an inch deeper than when they were in the ground in the nursery. The earth to be well pressed about the entire length of the root. Putting the plants in well, when transplanting, is one of the most important matters in having the hedge well started. Too much care cannot be taken in this particular.

Then comes the cultivating, hoeing, plowing, &c. The soil on both sides of the hedge wants thorough cultivation, and the hedge row should be kept clean during the whole of the summer season. No stock should be allowed in the enclosure for the first and second years, without a protecting fence alongside. This protection should be continued for three years; after that it will protect itself.

CUTTING THE HEDGE DOWN.—The next spring, which will be one year from the time the hedge was set, it must be cut off three inches above the ground, just above the root where it has a yellow appearance. The roots will then swell up and put forth a number of strong shoots just at the top of the ground. It then needs to be thoroughly cultivated about three times during the season.

The next cutting, which is at 2 years old, 12 inches, and so on at 12 inches each year, until it is 5 feet high, which should be the standard height.

By this process of cultivating thoroughly and cutting down severely, we at once form a strong, close and firm base, and if this process is rigidly carried out, success is certain.

It is thought by some that it is necessary to cut down more than once during the summer. In my opinion this is a great mistake. All that it requires is pruning once a year, late in the fall when the leaves drop off. This fact I have fully had demonstrated in my own experience. The ground alongside should be kept in good condition until it is four years old, when it will take care of itself. It will be found that much less training will be required after the hedge is full grown.

The first cutting, which will be one year from the time the hedge was set, can be done best with a pair or shears. I recommend the shears because it is difficult to cut plants off sufficiently low with anything else. The second, and all other cuttings can be done with an English hedge knife, which can be procured at any of the seed stores in New-York. The best way to do this is to walk along with the hedge on the right hand, making an upward stroke, cutting to the centre of the hedge. When you get to the end of the row, turn round on the left, and come back upon the other side. By this method a man can trim upwards of 100 rods per day.

This is a plain statement of my practical operations in growing the hedge. If it should be found of any use to the public, I am very happy in being able to give it to them. THOS. BELL. *Eatontown, N. J.*

[For the Country Gentleman and Cultivator.]

Experiences with the Water Ram.

MESSRS. EDITORS—You ask for experience with the hydraulic ram. For the benefit of X. Y. Z, I will inform him that the article (without "wool,") *is reliable.* I have one, carrying sufficient water for my stock and much to spare, up an elevation of 15 feet, and a distance of 350 feet, to my barn-yard, costing all told, $30. It has been running over four years, "day and night." It would be a great sacrifice to be compelled to dispense with it. J. W.

MESSRS. TUCKER—For the benefit of your Ohio correspondent X. Y. Z., I give my experience with a Hydraulic Ram which has been in operation nearly 14 years. It is No. 4, and manufactured by W. & B. Douglas of Middletown, Connecticut. The drive pipe from spring to ram is 1¼ in. calibre, and 30 feet long, and weighs 5 lb. to the foot, and cost 8c. per pound. Cost of ram $12, and expense of repairs about $4. The discharge of water from the ram is 3 feet and 4 inches below the spring where the drive pipe receives the water. The small pipe discharges 396 gallons in 24 hours, at a height of 18 feet above the ram perpendicular ascent, but 19 rods from ram by course of small pipe. It supplies my house, and the surplus runs to my barn, watering 23 head of stock and one horse. I have no doubt that enough water runs to the barn to water 75 head of stock both large and small.

I would say to your correspondent that the little fellow never tires out, but works on both night and day, and day and night. I would also say to X. Y. Z., if you have a good location for a ram, get one by all means, for he will work for less wages by a great deal than you can get your water brought to you in any other way.

Deerfield, Mass. JAMES CHILDS.

[For the Country Gentleman and Cultivator.]

MAKING MAPLE SUGAR.

MESSRS. L. TUCKER & SON—I notice in your paper of the 23d of Jan., an editorial on the subject of making Maple Sugar. In general your remarks are sound, but I would like to add my experience.

I find that the addition of a teaspoonful of salt to each 100 lbs. of sugar improves the taste of the sugar. It gives it a fuller taste. Salt is also good when used in syrup.

I don't use anything to clarify the syrup; if strained before boiling and skimmed while boiling, it will be of good color and free from all impurities. Trees that have large bushy tops will yield the best sap.

When nails are driven in the tree to hold the buckets, they should be drawn and saved for another year, and save the chopper and the sawyer some loud and harsh words, when the trees are used for wood or lumber. AUSABLE.

ANOTHER GOOD PIG.—N. E. A. of Orangeville, Ohio, writes the Co. GENT., page 81, in reference to Mr. S. Brockway's pigs. I killed a litter of grade Suffolk and Berkshires, November 3, that was dropt May 1, six months and two days old; thirty hours after they were killed one of them weighed 271 pounds, and is a trifle ahead of Mr. Brockway's. My pigs were fed on milk, dry corn, and provender meal, all they chose to eat. I received the 2d premium at the New-York State Fair—entered as small breed. Should Ohio, or any other State than New-York, beat ours, you may hear from my near neighbor, who received the first premium on a litter of eight pigs of the large breed. DANIEL PARKER. *Jefferson Co., N. Y.*

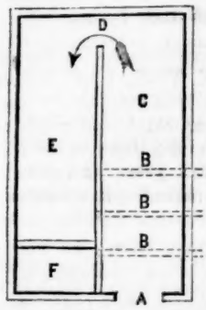
[We remember very well those "large breed" pigs which took the first prize, and should like to hear about them, whether Ohio challenges the information or not. EDS.]

Domestic Economy and Cookery.

[For the Country Gentleman and Cultivator.]

Improved Sap-Boiling Apparatus.

The annexed cut illustrates an improved form of arch for boiling sap, which is very highly spoken of by every one who has used it. It is very simple, and any mason of ordinary ingenuity can easily make one.



It consists of a double arch for two sheet iron pans, placed side by side. It is made wholly of brick, or can be built on the outside with flat stones.

A. is door for wood—B. B. B. three hollow cast iron tubes to lay the wood upon, extending through the wall at the right hand side. By having them cast hollow, the heat passes out into the open air, making them much more durable. They are three inches in diameter, and placed about six inches from the floor of the arch—C. pan—D. flue for passage of the fire—E. pan—F. chimney, or a wide stove pipe will answer as well. The space under pan E. need not be more than 12 inches deep, as no wood is placed under it. It should be raised about four inches higher, so that the sap after it becomes heated, can be carrried into the other pan by a syphon rigged with a faucet, so that the flow can be regulated.

The pan C. can be made longer than the other, but should not come quite out to the end of the arch, as the sap would be burned on the pan. A better way is to have the pans of the same size, so that they can be changed at the end of each boiling season, as the pan over the hottest fire will burn out much the soonest.

The operation of boiling sap in one of these arches, rigged as I have described it, is as follows:—In the morning fill both pans, and then build the fire. The sap in the pan C. will be boiling before that in the other; when it is, put your syphon in its place, and guage it so that it will just keep the pan C. full; then start the cold sap from the holder, (also fixed with a faucet,) so as to keep the pan E. full also.

This looks very well on paper, *but equally as well when in operation in the sugar bush.* The *advantage* of this kind of arch is economy of fuel. In the common straight arch a great deal of the heat passes up the chimney, the bricks of which are always so hot as to be unbearable to the naked hand, and when boiling in the night, I have often seen the flames *rising a foot above the top of the chimney.*

In the improved kind there is no such waste of heat, and it has been accurately ascertained that the quantity of wood that will boil sap for 100 pounds of sugar in the old, will boil enough for from 135 to 140 pounds in the new fashioned arch. A saving of from 35 to 40 per cent in the quantity of fuel, and the cost of preparing it, is worthy the attention of every one that makes maple sugar.

St. Lawrence Co., N. Y. ST. LAWRENCE.

[For the Country Gentleman and Cultivator.]

The Sugar Orchard---Tapping Trees, &c.

Eds. Co. Gent.—The attention of your readers is very properly called to the business of making maple sugar. Tin pails, holding ten and I believe twelve quarts, can be made by the hundred for $32. They should be but little larger at top, only sufficient to admit one being put into the other. Experience has proved that spouts made of sumac or elder, are better than tin or iron. I would recommend again the machine for making spouts which I forwarded to the office of the Country Gentleman several years ago. It costs but 37½ cents. Every experienced sugar maker knows the spout should not extend in beyond the bark, so as to prevent the sap flowing freely from the first grain, where most of the sap circulates. The saccharine sap like tannin is next the bark. The instrument to which I refer will fit the spout to any sized hole from half to three-fourths of an inch. It will set close, and is not so easily removed as when made by hand; 100 can be sharpened in thirty minutes.

I request one experiment to be made to ascertain the extent the hole should be bored into the tree. Bore one hole with a 1¼ inch auger 1 inch—fit a spout to this hole; then with a half or three-quarter inch auger, placed in the center of the large hole, bore in 6, 8 or 10 inches; a small spout can then be inserted through the large spout to receive the sap from the small hole Let the sap from each be taken into separate vessels. The small spout may be so long as to carry the sap into a pail outside of the other. Let the experiment be made on large sound trees; boil down the sap of 12 quarts of each.

Another experiment I wish tried: In all sugar works there are trees from which about equal quantities of sap run daily. I wish the trial to be made with one spout in one tree, and two or more in the other, but whether two or three, all to run into one vessel. My practice is to put but one spout in a tree; I believe as much sap will run from one spout as more, if the two spouts are placed as usual, within 4 or 6 inches of each other. By this practice one-half of the labor of tapping is saved, and what is more important, but half the injury is done to the tree.

I have works where the trees have been tapped 70 years in succession. The first was by boxing with an axe. The next process with an inch auger, making two holes in each tree six inches deep. The next improvement, three-quarter inch auger, two in a tree, three inches. Now half or three-eighths of an inch, two inches deep. It is evident the trees will be much less injured by the latter process.

The making of maple sugar is becoming a science, and a profitable business when properly attended to. I thought of making some remarks relating to the process of boiling, &c., particularly the evaporating process, which I believe will not be generally adopted. J. S. Pettibone. *Manchester, Vt.*

WHEEL GREASE.

I wish you could give a good receipt for making *axle grease.* The farmers in my neighborhood, (Orange Co.,) and I among them, complain of the miserable stuff we buy in boxes, which becomes stiff and gummy in a very short time, and, of course doubles and trebles the friction, which it ought to reduce. J. C. *Orange Co., N. Y.*

For iron axles, castor oil is excellent. For wood, tallow alone does tolerably well, probably much better than the purchased grease mentioned—although we have known of some of the latter (composition not known) that does well. Some farmers prefer tallow in summer, and lard in winter; while others stiffen the latter for summer use by the admixture of a little flour. A mixture of black lead is now generally repudiated. Have any of our correspondents tried soapstone and lard? And what are the results of the experiments of those who have used different lubricating substances?

RECIPE FOR CORN BREAD.

As a good deal is said about making corn bread in some of the papers, I will give your readers my way of making it:—

Take 4 cups of fine corn meal, 2 cups of flour, two-thirds of a cup of molasses, 1 teaspoonful of saleratus, and a little salt to suit taste. Mix *well* with a pint and a half of sour milk—bake in an iron basin, and steam it when cold.

Rhode Island. ECONOMY.

Hint to Cart Owners.

A convenient way of raising the wheel of a tipup cart to grease the axle, or unfasten the body from the tongue, is to set a stick forward of the axle, under the side of the body, of suitable length to raise the wheel; then bear down the body and fasten to the tongue. The wheel is then ready to slip off at option. Abraham Wanzer. *Fairfield Co., Conn.*

Good Blacking.—Boil three pints of beer with 2 oz ivory black. As it boils, put in a dessert spoonful of sweet oil, 2 oz. brown sugar and boil quitely till reduced to a quart.

The Poulterer's Companion.

[For the Cultivator and Country Gentleman.]

Keeping Poultry on a Large Scale.

By C. N. Bement.

Ever since the publication of the "American Poulterers' Companion," in 1845, we have been repeatedly applied to, in person, as well as by letter, for information in regard to the feasibility and management of poultry *on a large scale*—that is to make a profitable business of it—basing their calculations, no doubt, on the favorable accounts heretofore published, where from ten, twenty, to one hundred fowls have been kept, expenses and proceeds noted, showing a nett profit of from thirty-five cents to one dollar and over a head, as the result of one year. Now, say they, if one hundred hens can be made to pay one dollar each, why cannot 1,000 2,000 or 5,000, be made to pay at the same rate? A very reasonable calculation, but somehow rather difficult to accomplish.

We extract the following from one of the many letters addressed to us on the subject:—"Your article in the "Country Gentleman," (12th July, 1860,) on the "profits of fowls," has attracted attention, and in its perusal I have found both pleasure and disappointment—pleasure because of the statistics by which you prove that the rearing of fowls may be made a profitable pursuit—and disappointment in what you say 'you have never known any one to succeed that has attempted to make the rearing of poultry on a large scale profitable,' &c. The question is, how can I manage, myself, upon a place of five to ten acres, near some of our country towns, so as to make a good living therefrom? For several months we have cherished the intention of engaging in the raising of poultry and eggs for the New-York and other markets, proposing to keep a yard of one thousand fowls. My estimate has been, that five acres would be enough for this, and they would yield a clear profit of one dollar per head, equal to $1,000 per year. Your communication has alarmed me as to the correctness of my estimation, or rather as to the practicability of making so large a number sufficiently productive to derive a living therefrom. What is the cause of this difficulty? If Mr. Post can make 33 fowls yield him a clear profit of $75, why not the same yield according to the larger number of fowls? There must be some reason for this. What is it? If the same proportionate amount of diligence care and attention is bestowed in the one case as in the other, why not the same *comparative* result?

"If, therefore, a small number of fowls are profitable stock, and a larger number *un*profitable, where must the line of demarcation be drawn? Two hundred, three hundred, five hundred, or where? and what in your judgment is the greatest number that can be kept together so as to afford a reasonable assurance of a clear profit of one dollar per head? always presuming that the best personal attention is given them. Would it be prudent to commence with five hundred fowls? Would the additional presence of geese, ducks and turkeys, be objectionable?"

It is evident that when experiments have been tried with twenty, thirty, or one hundred fowls, the results have generally proved favorable; but from our experience, and from all the information we have been able to collect, no establishment *on a large scale*, has succeeded in this country. The only one of which we have any knowledge, that even *approached* success, was attached to the Astor House farm, situated in New Jersey.

Some six or seven years ago, this farm was purchased for the purpose of supplying the Astor House with milk, poultry, eggs, fruit and vegetables. Seven acres were appropriated to poultry, which was divided into four sections, one of which contained one thousand hens and chickens. A poultry-house 200 by 40 feet, also divided into four parts, containing 1,200 nests for laying and hatching. The poultry included 2,500 hens and chickens, 250 ducks, 200 turkeys, with a limited number of geese.

In the yards were fifteen hen-houses, and no less than one hundred chicken coops, where hens with their broods shelter and keep to themselves their respective families of feathered fledglings.

It is well known that fowls are very fond of animal and vegetable food. Here they could indulge to their hearts' content. The principal food—the offal of the Astor House—which of course embraced the greatest variety of nutricious substances.

Everything went on prosperously for the first year or two, eggs and chickens supplied in abundance, and the enterprise seemed complete, and *promised* success, when a malady broke out among the fowls, and swept them off daily by hundreds. About this time we visited the establishment, and were shown a number of invalids in the different stages of the disease. It was at first supposed the fowls were poisoned, but on dissecting and subjecting the contents of the crop and intestines to analysis, no indications of poison were discovered, or symptoms of disease detected. This was five years ago, since which we have understood that the "fowl enterprise" proved a failure, and was abandoned.

Last summer while on a visit at Staten Island, we were informed that an old sea Captain had an establishment where he kept one thousand fowls, which he made pay, over and above all expenses, $1,000 a year. Now, this was just what we had long been seeking, and resolved to look him up and ascertain the truth by personal inspection. On our arrival, we learned, much to our regret, that *the* Captain had died a short time previous to our visit. On questioning the widow, we were informed that they had never kept more than from 250 to 300 fowls. In reply to a question we put to her, whether they found it profitable to keep so large a number of fowls, she replied, "*I do not know—think not.*"

From the foregoing it would appear that it is rather a hopeless effort or enterprise to make a profitable business in keeping fowls on a large scale.

[For the Country Gentleman and Cultivator.]

ROUP IN POULTRY.

Messrs. Editors—Having recently built a new Poultry-house, and pulled down the old one, my fowls were assigned to the former as the only lawful abode or roosting-place. As this was built on the opposite side of the barn from the old coop, I thought it necessary to confine them in the new house till their attachment to it had become such that, on being let out, they would not insist on a lodgment in their former roosting-place.

In this house, with a large window and a latticed door on the South, admitting plenty of light and fresh air, my fowls were confined five days, supplied with corn, cabbage, fresh meat, pure water, lime, gravel, sand, and ashes. At the end of that period I noticed symptoms of disease among them, manifested by watery eyes, running at the nose, dullness and inactivity, loss of appetite, coughing, sneezing, gasping for breath from stoppage of the windpipe.

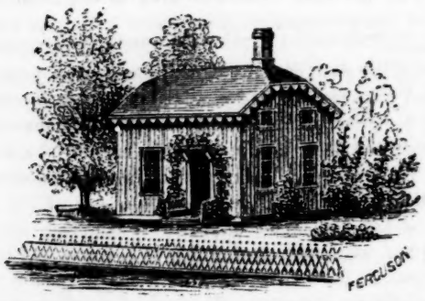
To the first three cases I administered two or three doses of pulverized alum in vinegar and water. This produced a violent coughing and sneezing, assisting in loosening and discharging the phlegm, as well as healing the membrane of the wind-pipe. These three recovered in three days. The disease went through the whole "house," and though of the thirty-six fowls but three received medical aid, not one has died, and they are all doing well.

Before being confined in the new house, my fowls had roosted all summer and autumn in an open slat coop with a tight roof. I infer that the change from running at large during the day and roosting in the open coop at night, to being confined in the less open house both day and night, as above stated, produced the disease.

So soon as I discovered this disease, the hens were let out doors, which was probably the best remedy. My conclusions, from closely observing the symptoms and nature of this disease, are that the Roup is similar to influenza in man; that it is contagious; that it is produced by sudden changes from freedom to confinement, from confinement to freedom, from dry to unusually wet weather, &c., and that the best remedy is the *prevention of the effects* of these changes on our fowls. Do not you concur with me in these opinions? I ask the opinions of Poultry-men on this subject.

Yaphank, Suffolk Co., N. Y. ISAAC T. WHITBECK.

Rural Architecture.



DESIGN FOR A LABORER'S COTTAGE.

This Design is for a cottage of the smallest size, built where a cellar cannot be excavated, or where it would not be an object sought. The deficiency is in part supplied by a spacious pantry. A perspective view is given above. The plan nearly explains itself. A good closet, opening into the bed-room, is made under the stairs. Two rooms may be made above stairs, by running a board partition across the middle, and passing through one to enter the other.

This cottage is covered with vertical plank, matched and battened, and lathed within on corresponding battens. The only timbers are the sills and plates. In exposed situations, where more stability would be required to resist the force of wind, pieces of plank about two by three or two by four inches should be made to constitute the inner battens. This is effected by erecting these first, or before the siding is nailed on, by setting them up perpendicularly on the top of the sill, nailing them to the sill, and fastening them at the top by laying an inch board flat upon their upper ends, and nailing every one to its place through this board. The joists for both floors are simply nailed to these vertical plank, the lower joists resting on the sills, and the upper resting on a board extending around inside and let into these plank. This will make a solid and strong frame with little material and a small amount of labor.

If planed and painted, this cottage, which is only 18 by 23 feet, would cost about two hundred and fifty dollars; if made of rough boards outside and whitewashed, about two hundred dollars—varying, however, more or less, according to the price of lumber, labor, and other causes.—*Tucker's Illustrated Annual Register.*

A GOOD GRANARY

J. J. Phelps of Avon, Ohio, gives the Co. Gentleman a description of a granary he has recently built, which he regards as an excellent one. The building is 30 feet square, and is large enough for a farm having 100 acres in tillage. It stands upon posts capped with inverted tin pans, as usual, for excluding rats—and which by the way should have no wire rim, as the most intelligent among these animals sometimes catch to this rim and lift themselves upwards. A movable bridge admits driving a wagon into the building, loaded with grain. On either side of the carriage-way, are six bins, twelve in all, which are 5 by 8 feet, and 14 feet high, and each holding about 450 bushels,—the granary being thus capable of containing over 5,000 bushels. The bins extend up to the second story, and are filled by drawing the grain from the wagon below up through a trap door, by means of a wheel and axle on the end of a crane, which carries the grain to each bin and discharges it. The cost of this granary was 150 dollars. [The sketch furnished us is too imperfect to make an engraving from, and a part of the reference letters being omitted, it is not satisfactorily understood.] The grain is drawn off through openings near the bottom, closed with a slide.

Where a side hill can be selected for a site, a more convenient granary may be built with a bridge (a portion movable if desired to exclude rats,) passing into the upper story, so that a loaded wagon with grain may be at once driven into it and unloaded into the granaries above. On the lower side below, a wagon may be driven for reloading, by wheeling the bags by means of a sack barrow, or by drawing off the grain through an inclined spout. But the most perfect way of all is to have the granary in a three story barn, as described on pages 140 and 141 of the last Register—the grain passing at once from the fanning mill to the granary.

LIGHTNING RODS.

Would you connect, on the roofs of houses, lightning rods from different chimneys—or would you prefer to run them straight to the ground, requiring three ground connections for as many chimneys? Also, would you advise running a rod into a well of water in daily use. B.

The best is a single rod, with the point extending upwards near the centre of the building, and the rod passing down by the shortest way. Itinerant rod erectors, who charge by the foot, find it to their interest to bristle the roof of houses and barns with many points, which are connected together by various horizontal pieces of iron, and then with the earth by one or more perpendicular rods. Each chimney is regarded as positively requiring its point, as shown in Fig. 1, and sometimes several more

Fig. 1.

Fig. 2.

are added. If these are all perfectly firm and secure, so as never to become displaced, and are well connected with the horizontal portion on the roof, and with the downward one to the earth, they may answer the purpose. But we should much prefer a single rod in the centre, (fig. 2) supported by a small wood standard, (set in the ridge timbers,) and extending to the earth by bending along down the roof and side wall, in the rear. The expense would be also greatly diminished, inasmuch as one point and one rod are cheaper than several. All that it is necessary to observe is, the point of the rod should be one half as high above the tops of the chimneys, as the horizontal distance to them from the rod.

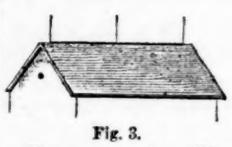


Fig. 3.

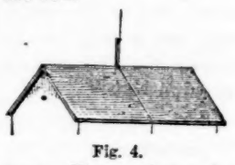


Fig. 4.

The same rule will apply to barns. Fig. 3 shows the way in which three points (and sometimes more) are commonly put up on such buildings. A much better mode is exhibited by Fig. 4—taking care to secure the requisite height.

If a rod always enters water, the water forms a good conductor to dissipate the fluid—but if the water is drawn off below the lower end of the rod, the latter may become a dangerous appendage, by drawing down the lightning without furnishing it a means of ready escape. On the whole, permanently moist earth, which may usually be found at a depth of six or eight feet, may be best.

Cultivating and Manuring Orchards.

Tree planters at the present time understand much better than formerly, the importance of good cultivation to newly transplanted orchards. Many of them have learned that fine, costly, valuable trees from the nursery, might as well be thrown into the brush heap for the fire, as left, in total neglect, to take care of themselves, after being transplanted. Setting out peach trees, especially in a grass field, or in a hard-crusted, weed-encumbered soil, is nearly certain death to them. Apple trees may possibly survive such treatment, but they scarcely grow for a long time. Even several years afterwards, the effect of cultivation is very striking. We have seen young peach orchards, five or six years old, standing in tall grass; the longest one-year shoots were not over three inches in length. Trees of the same age, under the best clean mellow cultivation, were making shoots three feet long. In other words, the latter grew as much in one year, as the former in twelve years. Intermediate grades of management,—cultivated but sown grain fields; short cropped pasture; soil plowed in spring, but neglected the rest of the season; these give results not greatly better than the meadow.

There is a curious influence exerted by the character of a thin surface, on the roots of a growing tree. These roots may be at the very first, *half a foot* below; yet, daily stirring but an inch of the surface, may quadruple the growth. Ten year old peach trees, in a loose subsoil, throw some of their roots two feet below the surface; yet if that surface is covered with a mat of turf, the roots of which are not found six inches down (as every plowman of sward has observed,) the growth of those trees will be nearly arrested; while a slightly plowed and frequently harrowed surface, will cause a rapid protrusion of shoots. These are the universally observed facts,—whatever the philosophy may be.

A peach tree never reaches any age, when the great difference between the influence of a grass surface or hard crust, and mellow culture, is not strikingly conspicuous. A peach orchard should therefore never be neglected, as long as it exists.

The roots of the apple, cherry, and standard pear, run down further into the soil than the roots of the peach, and consequently when they become quite large, cultivating the surface has less effect upon them. We have examined an apple orchard twenty-two years old, a part of it in pasture, and the rest plowed two or three times in the season, but not cropped. The soil is light; and the difference between the two portions is but slightly in favor of the cultivated part. If the tree had been but five or six years old, the difference would no doubt have been far greater; and the summer after transplanting, the shoots on the cultivated part would have probably grown two feet, and but two or three inches at the most, and probably not an inch, if standing neglected in grass.

The question is asked us, and this question has prompted these remarks—"When shall I know whether my full grown orchard needs plowing or manuring, or whether I should be satisfied with its present growth and productiveness?"

The answer must be—If the branches now make but little growth, so that the annual shoots are not more than two or three, or at most six or seven inches, the trees are not in a sufficiently thrifty condition. A more vigorous growth would give larger crops, and fruit of a finer and better quality; and a heavy product would not so soon exhaust their energies—they would recover from such temporary exhaustion more speedily. A shallow plowing of the surface, and a harrowing once a month for three or four times afterwards, will be useful, and much more useful on a heavy soil than a light one; but this will not probably be quite enough. An occasional top-dressing with a moderate coat of manure either in autumn or early in winter, will contribute to the vigor of the trees; and a load or two of ashes per acre, scattered broadcast under them, may be of great use, and cannot injure in any kind of soil. A scattering of lime, in some instances, has proved very beneficial. A more copious treatment with manure, without breaking the sod, might even answer.

If the branches are thick, and present a mass of "brush," they should be evenly thinned out towards their ends, or on the outside, leaving the best and most thrifty to grow, thus letting in among them the light from without. Be especially careful to avoid the common and fatal error of trimming the centre of the tree near the top of the trunk, or among the large branches, while the exterior remains as thick as ever—and never, for any consideration, cut off a large limb, unless the most urgent necessity demands it. Thin in—shorten in—from the outside—never from the inside towards the outer. Usually, however, very little pruning of any kind will be needed—it is better to trust to the effect of enriching and cultivating the ground.

Continue the manuring each year until the annual shoots shall have attained at least a foot in length, when it may be slackened or discontinued for a time. When this improved growth takes place, the better quality of the fruit, as well as its greater size, will give much satisfaction. The manure may be applied now in early winter.

THE BONAPARTEA.

During a recent visit to the nurseries of Ellwanger & Barry, at Rochester, we had an opportunity of seeing a fine plant of the *Bonapartea juncea* in full bloom. Like the century plant, it blooms but once after the lapse of years. The flower stalk rises from a mass of leaves near the ground, and bears flowers along its column. In this plant, it was 13 feet high, one and a half inches in diameter, and during the time of its most rapid growth, made six to eight inches in a day. The leaves are as large as one's finger, a foot long, and are over two thousand in number, all proceeding from a green ball eight inches high and a foot in diameter. It is a rare plant, and altogether is a great curiosity.

Mice and Fruit Trees.

If mice are as plenty in other parts of the country as they are in this section, we may expect to hear another spring, of much damage done to fruit trees. There are many means of prevention. Treading the snow about the trees is as good as any, *if it is only attended to.* It may have to be repeated two or three times in the course of the winter. This is but a reminder to those that neglected to protect their trees before winter came on.

ST. LAWRENCE.

Fruit-Growers' Society of Western New-York.

(Discussion continued from page 59.)

Culture of the Strawberry.

J. KNOX, of Pittsburgh, (who has 50 acres of strawberries in the highest state of cultivation,) gave, at request, the following statement, in substance, of his method of cultivating the strawberry.

His soil is a light clay, with limestone. He thought such a soil preferable to a light one. He first underdrained thoroughly, and then stirred the soil twenty inches to two feet in depth. Such treatment is best for almost any kind of fruits or fruit trees, as peaches, grapes, and all else. He employs two horses with a common plow and a subsoiler drawn by a yoke of oxen; and continues to plow in different directions till the whole is thoroughly rendered mellow down about two feet. Strawberries, he has found, do not need much manuring; good wheat or corn land answers well. He plants in rows two and a half feet apart, and ten inches asunder in the row. He has used a cultivator between the rows, and after this a subsoil plow; but latterly he has discarded all horse-cultivation, believing that the less the roots, which cover the whole ground with a network of fibres, are disturbed the better. He merely has the weeds cut with a hoe, and carefully takes all the runners off by hand. No plantation for fruit should be allowed to produce any runners, nor to bear any fruit the first year—this course only applies to that portion which is set apart for a crop—another portion is allowed to increase by runners for the purpose of making new plantations. The plants are set out early in the spring. By keeping the runners closely cut, the plants bear an abundance of fruit only; the two objects, fruit, and new plants, should be kept perfectly distinct.

The plants are protected in winter by a covering of straw threshed with the flail that it may be easily handled and spread. Rye is preferred for this purpose. Two loads per acre is the usual quantity. In answer to an inquiry if the straw did not introduce the seeds of weeds, he said he had never found any difficulty of this sort. He thinks that protection preserves the vigor of the plant, and that it bears better. In spring he removes the straw away from over the plants and places it between the rows.

He stated that he could not speak with confidence as to the best varieties of the strawberry, because some succeeded best in one place, and others in another place. Hovey's seedling, for instance, did well at Boston and Cleveland, but with every kind of management at Pittsburgh it had failed. Buist's Prize was formerly very successful, but it has now run out, and is hardly worth cultivating. He has found certain pistillate sorts to do best with some peculiar impregnators—and is experimenting on this subject. Hence he cannot, with these considerations, speak with confidence on the subject of varieties. Of the early sorts he prefers Baltimore Scarlet, Jenny Lind and Burr's New Pine—and after naming several for a general crop, said that the Triomphe de Gand was "the strawberry of all strawberries,"—and left little more to be desired—being a healthy, strong grower, and producing a heavy crop—not so much as the Wilson, but the fruit was worth more per acre—is satisfied it may be made to yield three hundred bushels per acre, and that this amount may be raised, picked and marketed for two hundred dollars, or sixty-six cents per bushel, all told—being so large it is easily picked. The Triomphe de Gand has, however, one disadvantage—it attracts so much attention in market that you can sell no other sort while it remains on hand. He has sent them to Buffalo, Cleveland, Chicago, Philadelphia and New-York; they carried safely, and he has had telegraphic despatches for more than his whole crop. He could have sold more than his entire crop in New-York city alone. If he could have but one variety, it should be the Triomphe de Gand. He thinks highly of the Wilson.

The great depth to which he cultivates before setting the plants will, he thinks, be sufficient to give 10 or 12 crops without replanting; but for the ordinary depth of 8 or 10 inches, two or three crops are enough. Cutting off all the runners, he stated, tended to prevent exhaustion, and made strong stoots that bore abundance of fruit. The only fertilizer he uses is well rotted stable manure. A member inquiring if he could succeed with this management applied to Hovey's seedling, he said he had never succeeded with Hovey with any kind of treatment, but Burr's New Pine and others had done well.

[We were informed by some of the members that they had tried this mode of cutting off the runners, and had not succeeded to satisfaction—had lost money by it. It no doubt needs the best of management, and perhaps the deep mellowing of the subsoil here described.]

This kind of management he regards as the most profitable, although requiring much hand labor; the question is not, "With how small an outlay can you raise an acre of strawberries?" but, "Which pays the best?" If this does, and if it yields a hundred per cent. on the money invested, then, *the more money invested the better.* After the conclusion of his remarks,

James Vick called the attention of the members present who were farmers, to the fact that here, "the greatest strawberry cultivator in the world," had found the most thorough culture to afford the highest profit, a principle which he thought would apply to all other crops, and that the *best way* would be the best for farmers as well as for other people.

Time for Pruning.

Wm. B. Smith of Syracuse, thought a tree should be pruned about the first of June; no sap runs then. If done so early that the cut may dry over before the warm weather comes on, the cold may injure. Pruning does not hurt the growth early in summer if lightly performed. He prunes nursery trees at this time, but takes care not to cut severely. L. B. Langworthy said that time was a matter of little importance, but he preferred on the whole to prune after the leaves have come out in late spring; they heal better and do not crack. —— Huntingdon of Rochester, had formerly pruned apple orchards extensively for the purpose of grafting, from early spring till the leaves expanded; when pruned early the sap ran out and formed a black streak down the trunk—those pruned later formed a bright ring of new wood around the cut. He had never cut before the first of April, but had seen the sap ooze from wounds made earlier. G. Ellwanger said that very little growth was obtained from trees pruned so late as the first of June. Prefers pruning in February for producing healthy shoots. If done in early summer, he would do nothing more than to cut out positively bad limbs; pinching in may, however, be performed then to advantage. The pruning of an apple orchard should be done while the trees are young, and if this is performed, very little is required afterwards. —— Sharp of Lockport, who had several thousand trees in his orchard, had found late pruning to be bad, or after the leaves were out. H. N. Langworthy of Rochester, had sometimes performed the operation as the leaves were coming out, and the buds left would not start, or required nearly all summer to get under way. Those which were cut at mid-winter did well. If the limbs of apple trees were cut much later, or in spring, the sap flows out and blackens the wood and bark. H. E. Hooker held the same opinion as to the time for pruning—if the work is done as the leaves are expanding, or out, the trees would not grow or start, and he had seen many ruined in this way. He thought where a very moderate pruning was given to large trees in June, they might not be injured, but May was not the proper season. These views accorded with those of most others who spoke on the subject.

THE JEFFRIES APPLE.—On the grounds of Ellwanger & Barry, at Rochester, this variety, they inform us, ripens during the first half of September, and as an amateur fruit is the finest for its season. It is too small for market. It has a higher flavor than the Summer Rose.

Systematic Formation of Pyramids.*

[Translated from the Revue Horticole for the Co. Gent.]

For more than half a century the practice has existed of pruning fruit trees in the shape of pyramids, or rather cones. But most of them everywhere are so badly formed that they hardly deserve any name. Some are pruned very short every year, and resemble more a thick bush, excluding air and light; others are better directed, but the central stem is seldom in harmony with the lateral branches; this is almost always too short, and the branches too long. It is in order to make this form better understood that I am going to describe it succinctly, in making use of a geometrical figure.

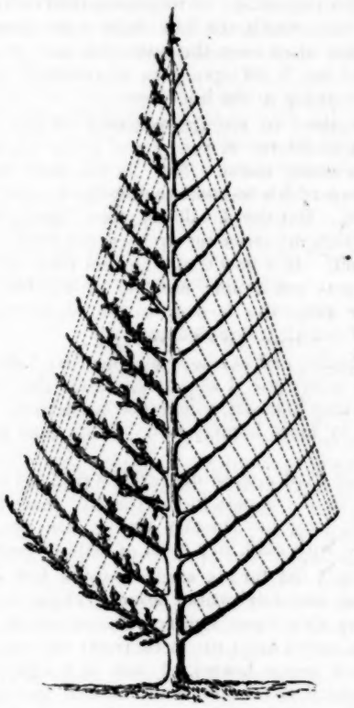


Diagram of Pruning a Pyramidal Fruit Tree.

The right hand side shows the branches only; the successive upright lines exhibit the pruning each year. The left hand branches show the fruit spurs.

The lines extending from the lower branch upwards, and which are united at the stem in the form of a cone, show the relative length to be given each year to the shoots of the lateral branches.

Most pear trees can be brought to this form; the apple with difficulty, but the apricot, cherry, peach and plum trees are made so to advantage.

EVENING PARTY APPLE.

Many of the readers of the Country Gentheman will remember the interest awakened by the report of the Penn. Hort. Society in 1853, bringing into notice a number of native Pennsylvania fruits. Among these, was the "Evening Party apple."

Through the kindness of Mr. Waring of the Penn. Farm School, we were favored with scions. In 1860 it fruited with us in Wisconsin, and again in 1861. It is now in season, and is really an excellent fruit. Thus far our specimens have exceeded the size as grown in Pennsylvania, being rather above medium; skin, whitish yellow, striped and splashed with red; flesh, tender, crisp, juicy, with a very agreeable flavor. Tree fair grower, ripens up well, and seems entirely hardy. We thing it will prove adapted to the Northwest.

Columbus, Ohio, Jan., 1862. A. G. HANFORD.

[For the Country Gentleman and Cultivator.]

Protection in Winter---Blight in Trees.

The propriety of protecting plants from repeated severe frosts has always been recognised by gardeners, but it is only recently that the minds of fruit-growers have begun to yield to the conviction that all their plants will well repay any additional outlay consequent in giving them judicious protection in winter. It may safely be asserted that plants are not benefitted by being frozen; true, there are numerous plants so constituted that they can withstand our ordinary winters without being injured, but it does not follow that frost is a necessary element to their existence. It is well known that gardeners who wish to attain the best results from their forced fruits—such as strawberries, grapes, &c.—that are to be ripened artificially in May and June, are particularly careful that the plants are not previously subjected to severe frosts, so that none of the delicate roots may be destroyed, experience having proved that the exemption from frost is of great importance to the crop. In cold graperies, failures have frequently been traced to exposure to frosts, and it is found that those most uniformly successful are seldom allowed to fall more than ten or fifteen degrees below the freezing point, and the plants laid horizontally and well covered with leaves from the forest.

Various opinions have been pronounced relative to the manner in which frost acts injuriously on plants; the most generally received, is the disruption of the tissue and sap vessels, consequent upon the expansion of the sap during its conversion to ice. This theory, however, does not seem to explain fully all the phenomena attending the destruction of plants by frost

My observation has convinced me that many of the maladies of fruit trees, such as are commonly termed blights, are superinduced by the action of frost under peculiar circumstances in early spring.

It is well known that there is a constant circulation of sap in trees even in winter, except when the wood is frozen. We need only observe the result of cutting a branch from a tree in mid-winter to illustrate this; such a severed limb, if exposed, will rapidly dry up, being deprived of its supply of moisture from the roots. Now if we look at our fruit trees in spring, we will occasionally find them in a condition somewhat similar to that of the severed branch. The soil is frozen 18 or 20 inches deep, and all the roots that are embedded in that soil are of course also in a frozen state. While in this condition, the weather may be cold, harsh, and a blustering, *dry*, frosty wind, rapidly extracting moisture from every damp surface with which it comes in contact, the trees are subjected to an exhausting process which they cannot supply, the roots are in a mass of ice and cannot transmit moisture to the branches to overcome or meet the demands by evaporation, the sap vessels are dried up and contracted, vitality is destroyed, and a *blight* spot is observed in early summer, more or less extensive according to the severity of the injury—endeavor to cut this blighted portion, and it will be found hard, and the wood brown and completely dead.

This I have long thought to be the real cause of, at least, many of our blights, and have proved that covering the roots of pear trees and grape-vines during winter is of more importance to the plant than mulching in summer, and we all know how important summer mulching is, and how conducive to the health and continued vigor of plants.

W. S. G.

Apple Tree Borers.—C. Wheeler, of Stratford, Ct., says the *Boston Cultivator*, destroys or repels the apple borer, by putting small cotton pellets saturated with turpentine in the holes made by the insects, and then stopping them with putty. The vapor of the turpentine, it is supposed, kills the borer, and "Mr. W. has saved trees by this method which were perforated in fifteen to twenty places within two inches of the ground, and which were supposed to be past recovery."

[For the Country Gentleman and Cultivator.]

ABOUT FEEDING STOCK.

I want to group together a few ideas about feeding stock, and it is difficult to select a title that exactly fits all I have to say.

One thought is this: If you draw away from a cow, or a stable full of cows, a quantity of milk at the temperature of 98 degrees, you reduce the animal heat of that cow, or cows, by the amount of heat in your milk, and you must restore it to them. You have your choice to restore it in kind, i. e., with heated food, or to allow the natural process of respiration to restore it for you.

If you choose the latter alternative, you must do it at the expense, not only of hay and grain—*carbon* in some edible, and therefore expensive form, but also of the physical energies of the animal, which are taxed for this purpose in addition to the production of the milk from the elements of milk in the food. You demand of her not only the milk, 10, 20 or 30 pounds per day, but your milk must be of the temperature of 98 degrees, and you do not reflect that by just so much vital energy as is required for heating the milk to that temperature, by just so much is the animal's ability diminished to produce the milk itself.

Suppose, for example, that a cow weighing 900 pounds gives 30 pounds of milk per day, then 30-900ths, or one-thirtieth of all her animal heat is daily drawn away from her in her milk, and one-thirtieth of all her food and vital energy—mastication, digestion and respiration—that go to the production of animal heat, are spent to no other purpose than to furnish you with milk that is blood warm. This is equivalent to one day in every month, or twelve days in every year, devoted to this purpose, which if you adopt the alternative of feeding the cow warm slops or steamed food, is, it seems to me, saved.

But if this argument is correct and forcible, how much more forcible an argument founded on the entire necessities of the animal for a supply of artificial heat.

Suppose you take two specimens of the genus homo as an illustration, an Esquimaux from Labrador, and a Hindoo from the Ganges. Your Esquimaux will drink off a pint of lamp oil at a draught. Your Asiatic, from his burning plains, is contented with a morsel of rice for his daily food. Why is this? Because the child of the ice needs the carbon to feed the combustion that in his lungs or blood preserves that wonderful machine, his body, at the constant warmth of 90 degrees, though the air around him is measured by a temperature 60 or 70 degrees below zero.

The Asiatic, allowing that he could digest the oil, if he indulged in such draughts, would soon become himself a mass of oil. So with your stock. Leave them out-doors, exposed to the storms of a New-York winter, and they will not thrive, for they cannot eat much more than enough to keep up the animal heat; they have little ability for the production either of fat or milk. Stable them, and feed them properly, and they have a surplus of vital power for both. Why not advance one step farther, and feed them warm food to increase still more this power? So on the score of economy, I also find reasons for feeding warm food. Hay averages at this place $12 per ton. Wood is worth $5 per cord of two tons. Your artificial costs, therefore, less than one-fourth as much as your natural heat.

I am satisfied that it is easy to make a stable too warm and close for cows. I never enter an underground stable with its air-tight walls and solid floor, without feeling that such a place cannot be fit for the habitation of a herd of cattle. You or I, Messrs. Editors, can stand it to go into a crowded room and spend an hour or two of an evening, but we could not enjoy good health, compelled to live in that room, with the conditions reversed, an hour or so out of the crowd, instead of an hour or so in. Feeding warm food enables you to afford the stock all the heat they need, without too close stables.

I was conversing with an old farmer the other day about this subject, explaining my system of feeding warm slops thrown upon cut feed, and the greediness with which my cows devoured a bushel of cut hay, clover, and cornstalks. He said he had been in the habit years ago, of selling his grain to a distiller, and he had watched the process of feeding stock there. He said he had often sold the distiller straw for the cattle. It was spread out in the troughs or mangers into which the hot slops were poured, and, said he, I have often seen the cattle fish out rye straw six feet long and eat it all up clean, so palatable had it become from soaking in the hot slops.

I was surprised to see the remarks of our Nestor of New-York agriculture, in your paper a few weeks ago, in relation to cutting stalks. But he has been so ably answered by two of his immediate neighbors, that I can add nothing to it. But this I will say, that I make the cleanness with which my cows eat up their cut feed, a guide in feeding grain. If a cow treats her cut feed too indifferently, she gets less grain; and my herd is fed for milk, and interest keeps the feed up to the highest point that will pay. I get all the milk I can.

If my appetite had become so poor that I could relish nothing but mince pie, I should conclude that something was wrong, and I should reduce the mince pie. I should come down to more homely fare, johnny cake and bacon for instance.

Last winter I fed a good deal of first rate hay and stalks, with a portion of cut oats in the bundle, mixed with the refuse of the long hay, mostly clover, also cut, and the whole mixed with cold, dry meal of oats or corn.

This winter I fed for six weeks nothing but cornstalks and long hay, and buckwheat bran or ships mixed with cob meal wet with warm water. The refuse of the stalks and hay was saved until we were ready to cut it. Since then each cow gets a bushel of this at 6 A. M, with the hot slops poured on and carefully mixed up with it at 8 o'clock, no hay till 11 o'clock, and they eat next to nothing of it; their grain feed not increased a particle, and yet we had no falling off in milk, but a gain on last winter, with the same number of cows, though not the same animals, altogether of not less than 25 per cent. The nourishment was all there, but they would not eat it. They wanted coaxing, just as you and I want sugar and syrup, and salt and pepper, to be coaxed to eat enough.

In short, so well pleased have I been with *feeding heat* to my stock, that I have ordered a steam boiler, and I shall steam a considerable portion of my feed hereafter, of which my Watertown friend, J. L. R., will take note, that straw will form the principal diluent. When completed and in order I shall not fail to report.

Utica, N. Y. JOHN G. WEBB.

P. S.—Let me add one recommend for Wheeler, Mellick & Co.'s (Albany,) single horse power and feed cutter. It is but a small matter to cut the feed of fifty cows with it.

[For the Country Gentleman and Cultivator.]

Live and Dead Weight of Hogs.

As many farmers make a practice of selling their fat hogs to drovers, at so much a pound live weight, I will state the result of a recent experiment:

A medium sized, well fatted hog was weighed alive—live weight, 365 lbs.—after bleeding, 358 lbs.—after dressing, 315 lbs.—showing a loss of 50 lbs., or a trifle over one-seventh. A poorly fatted hog would probably lose more. ST. LAWRENCE.

Improvement in our Breeds of Cattle.

Occasionally we meet with Farmers who are disposed to be very eulogistic of what they term the "Native Breed of Cattle." Under this denomination the whole mongrel stock of the country, not known to have received, within a recent period, an infusion of imported blood, has been generally included; indeed we have sometimes found high grades of improved blood, called "natives," with great persistance, when it became expedient for any temporary purpose so to rank them.

For the anticipated improvement of the "natives," considerable sums of money have been expended, both by individuals in importing the different breeds of English cattle, and by societies in encouraging their importation and adoption, through offers of liberal Premiums. The question now and then arises, whether these anticipations of "improvement" have in fact been realized—whether the money of our societies, our importers and our breeders has been well expended, or whether, on the other hand, "fashion" and "fancy" have not led to very unpractical extravagances? Our own conviction is, that many intelligent farmers have a lingering impression on their minds that it is the *latter question*, rather than the former, which should be answered in the affirmative.

The *figures*, however, when we can get at them, and the opinions of those best qualified to judge, seem fully to warrant a very different conclusion. A committee of the "Hampshire, Franklin and Hampden" (Mass.) Ag. Society, of which G. M. Atwater, Esq., was chairman, for example, give some interesting data in a report published in its Transactions for 1861, the perusal of which has now called our attention to the subject—data which go to prove a striking advance in the weight attained by the cattle of the Connecticut Valley during the last forty years. It appears that in 1820 Jedediah Taylor of Westfield, furnished 14 head "of the best known herd of fatted cattle," for the New-York market, the average dressed weight of which was 1,000 pounds. In 1837 the herd of his son, George Taylor, also favorably known, dressed 1,300 pounds each. In 1860 the dressed weight of Hezekiah Taylor's herd was 1,500 pounds—an increase of 50 per ct. upon that of Jedediah Taylor's stock 40 years before, and of over 15 per ct. upon that of George Taylor, 13 years before. Now, from another part of the same report, we learn that it was in 1820 that Durham stock was first introduced into Westfield by I. Yeamans; that further purchases of Durhams in the same region were made by S. Lathrop of West Springfield, in 1824, the Huntingtons of Hadley, in 1834, and P. Lathrop in 1837; since which the character of the stock for fattening purposes has evidently been on the constant advance.

If it is objected that this is only an isolated case, we have some facts of more general range to offer, received from an authority which, in this particular direction, few will be inclined to question. We had proposed to ourselves, last summer, a somewhat extended range of inquiry bearing upon the distribution of the improved breeds of cattle throughout the country, and the results accomplished by that distribution; circumstances prevented its investigation to such an extent as we at first designed, and at length the matter was indefinitely "laid on the table." But an interesting letter was received from Solon Robinson at that time, which the present train of thought has called to light; we need scarcely add that Mr. R. speaks of what he knows. He says:

"In answer to your questions I will say that the estimate put upon the average weight of the 234,077 head of bullocks received in New-York in 1860, was 7¼ cwt. In 1859 it was 6¼ cwt., but that was thought rather too low. The increase of 1860 was owing to the increase of grade Durhams, and to the better crop of corn. Of the whole number received I get correct reports of where they are derived from of only 181,584. Of these Ohio gave 35,131; Kentucky, 12,814; Illinois, 62,567; Indiana, 12,936; New-York, 28,219. I think 90 per cent. of Ohio, 95 of Kentucky, 10 of Illinois, 15 of Indiana, 10 of New-York, are grade Durhams. Some from Ohio and Kentucky are full blood. A much larger proportion of New-York stock shows Devon blood.

"Ten years ago, when I first began to report the cattle market, there was not one in ten of the number now that showed improved blood. It is now rare to see a drove from Kentucky that is not all grade to full Durham, and it is getting to be the case with Ohio. Indiana and Illinois too are increasing the proportion very rapidly. The proportion of all other improved blood to Durham is not ten per cent. Only for the fact that a large portion of the Durhams come to market the summer after they are three years old, *I think the average weight of all the bullocks now received would be* 100 *pounds more than ten years ago.* Then 6 cwt. would have been a full average; now 7 cwt. is not any too large. The Durhams will average 8 cwt. all this year, and *one and one-half cwt. more than the native breed of the same ages.*

"The only marked improvement in sheep is in South-Down grade lambs, which sell probably at $1 a head more than others of equal age. Solon Robinson, *Aug.* 11, 1861."

It will be observed how high the proportion of Short-Horn or Durham blood is rated in the Kentucky and Ohio cattle—States in which this breed has been diffusing itself more and more generally ever since its first introduction, as long ago as 1817. Mr. R. says it is now "rare to see a Kentucky drove that is not *all grade to full Durham.*"

It is also to be remarked that in this State the Devon blood appears to have proved, as a general thing, better suited than the Short-Horn, to the wants and circumstances of our farmers and their farms.

[For the Country Gentleman and Cultivator.]

Cures for Big Head and Poll Evil.

Here are two receipts which are of great value to the owners of horses or mules. I have tried both in many cases, with entire success.

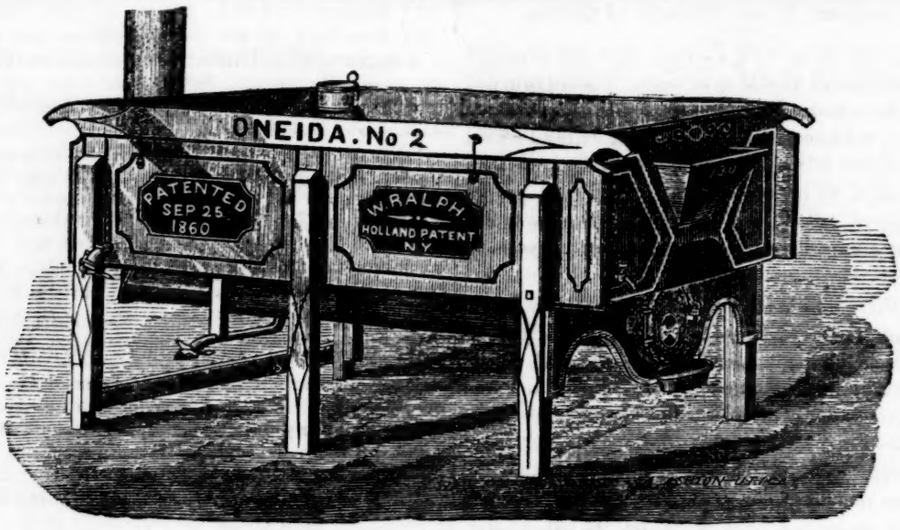
Big Head.—Cure for big head, which is an enlargement of the bone on the face of a horse or mule in a direct line from the eye to the nostril:—Extract the first jaw tooth by punching it out. It sometimes comes on both sides of the face; then a tooth will have to be taken out on each side.

Cure of Fistula or Poll Evil in Horses.—Take one quart of cider vinegar, one quart of urine, and three tablespoonfuls of fine pulverized glass—mix and let stand in a warm place for three days, and then pour two tablespoonfuls in each ear of the horse every other day until all used. I have known it to cure old cases of two years running, by the time it was used. D. J. W.

Versailles, Ky.

Gain in Feeding.

Eds. Co. Gent.—I herewith send you the gain of one yoke of oxen for 30 days—also one pair of stags, the same spoken of as having been fed on pumpkins the past fall. They were fed six quarts meal per day each—corn and buckwheat mixed and ground together. The oxen gained 100 pounds—one stag 80 pounds; the other upwards of 100; the largest gaining most, and he was also confined in the stable all the time; the other and the oxen ran in the yard all the pleasant weather. I think the gain was as much as could be expected in either case, but the stags have done better than I expected. The oxen were seven years old, the stags but three: probably that was one reason of their greater gain. Shall test them again in 30 days more; but suppose as they get fatter they will gain less; think their gain the past 30 days was much greater than it would have been had they not had their pumpkins for the two months previous. Their feed for this month is corn in the ear mixed with one-third oats, and ground fine. Jona. Talcott.



THE ONEIDA CHEESE VAT.

A correspondent at East Dorset, Vt., wishes to know what cheese vat is preferred by the Dairymen of this State. Above we give an engraving of one which is extensively used in Central New-York, and is believed to be equal to any other, if not the best in the State. If any one has a better, we shall be glad to hear from them. [See advertisement of the patentee, p. 86 of this no.]

[For the Cultivator and Country Gentleman.]

BUTTER FROM SEVEN COWS.

Messrs. Editors—I send you the following statement, thinking it might interest some of your readers and perhaps be edifying to agricultuaal societies that have awarded their first premiums to dairies, where the cows have averaged 160 pounds of butter, or thereabouts, for the season. If competitors for premiums on this article were required —in addition to making a *superior* article—to come up to a certain figure, say an average of 200 pounds to the cow, to obtain the *first* prize—the cows to be kept *well*—not on "bread and butter"—would it not tend to the better management and treatment of these useful animals? and would it not lead to a better class of cows being brought into the dairy? The barbarous treatment they receive in the winter, and the stunted, nearly calves, that are afterwards used as milkers, is one great reason, if not *the* great reason, why dairies are in many instances so unproductive. But I am "prone to wander," and will return to the matter in hand.

In giving statements of this kind, or in any other farm operations, I think the *details* should be given, so that one can the better judge whether the thing will pay. Cows may be kept *too well*, or not *well enough*, to afford a profit. You will therefore pardon me for entering somewhat into particulars.

This statement embraces the whole of the year 1861. The cows were all dried off about the 20th of January, except a two-year old farrow heifer, and came in from the middle to the last of March. This heifer furnished milk for the family through the winter, but made no butter, she having dropped her first calf the last of December, 1859, when a little over 20 months old.

In the spring we started with eight cows—seven new milch and the farrow heifer. Their ages were as follows: One 2, one 3, one 4, one 6, one 7, one 8, and one 9 years old. The 2-year old is three-fourths Ayrshire, the others are the common or native breed. The farrow heifer continued to furnish milk for family use until the 20th of September, when she was dried off, and on the 25th of October she had her second calf. When this cow came in, the 4-year old (having the disagreeable habit of holding up her milk occasionally) was dried off and fattened. So that from the 20th of September to the end of the year we had but seven cows giving milk, and the milk and cream for the use of a family of five persons was taken from their milk after that date. Now I think that the new milch cow gave enough more milk than either of the others from the first of November (at which time her milk was saved) to furnish what was used in the family up to the first of January, and during the time of her going dry previous to calving. It probably would not vary much from this, and I think would be as likely to vary one way as the other. I therefore estimate the butter made as being made from *all* the milk of seven cows for the year.

The manner of keeping the cows was this: Last winter they were fed good early cut hay night and morning —cut straw or chaff, with one quart of barley meal and shorts, wet with boiling water, and six quarts of carrots, at noon. In the middle of the forenoon and afternoon they had corn-fodder. About a week before calving the meal and shorts was increased to two quarts, and after calving to three quarts. This feed was continued until the 29th of May, when they had a full supply of green feed. From the 29th of May to the 5th of September they were kept on clover, grass, millet and green corn—their feed being cut and fed to them in the stable. On the 5th of September they were turned into the meadow and stubble ground, and had the run here until the 30th of October. During this time they were fed a little corn-fodder night and morning. On the 30th of October they were brought to the stable, and were fed early cut hay, corn-fodder, carrot tops, and six quarts of carrots each daily until the middle of November, when two quarts of shorts and corn, ground in the ear—equal parts of each by weight —was added to their feed. Their keeping this winter has been the same as that of last winter, with the exception of one additional quart of ground feed, and they being required to cut their own straw. But being very *sensible* cows they decline doing so to any amount, thinking it better to lie upon than to eat. I honor their judgment.

The cows were stabled nights the year round, and in cold weather were kept in the stable through the day, being turned out to water twice—forenoon and afternoon. They were regularly milked at 5 o'clock night and morning, by one milker, (your humble servant, who has done the milking for ten years or more, with but few exceptions,) and were *milked clean.*

I do not think this can be called *high* keeping, or keeping them on "bread and butter." My aim has been to give them *good* food, and a plenty of it. I freely admit that their keeping has been better than *straw.* And I

would further say that "bread and butter" is intimately connected with this mode of keeping—the butter being taken from and not fed to the cows, and the bread will be forth coming when the manure made by them is applied to the land. But by this time you probably would like to know the result of all this without further comment.

Well, then, we have made from the cows, and during the time as above stated, 1,739 pounds and 1 ounce of butter—an average of 248 pounds and 7 ounces to the cow. Each churning was weighed after being worked over the second time, and made into rolls, and an account kept of it, and the butter was furnished to families in "the village" weekly.

I presume some have done better than this, for I do not suppose that I have beat all creation, and I most heartily rejoice in their success. Many, however, have not averaged over 150 pounds to the cow, and probably some have fell short of *that*. And most likely their cows have *run them in debt*. I think if such persons would sell out and enlist they would be the gainers. For they can make more money in fighting for their country, or in playing peep-a-boo with secesh as fighting is out of the question, than by making butter.

I would say in conclusion that the season has been a very good one for dairying, though cows that are soiled are not very materially affected by the season when properly provided for. And further, the above result was arrived at without any extra pains being taken to see how much butter could be made, but by the ordinary process of making butter through the season. The last week in December we made 24 pounds of butter.

Jefferson Co., N. Y. J. L. R.

Freezing Cream for Butter.

A Wisconsin correspondent of the Rural New-Yorker, says that if milk is set in winter where it will freeze, and the cream be taken off and kept without thawing until enough is had for a churning, and it is then thawed gradually and churned, it will make good winter butter. It is the alternate freezing and thawing which makes cream and butter bitter. Those who cannot keep milk without freezing, may try this plan.

PRODUCT OF FIVE COWS.

The profit of five cows I think worthy of a place in the COUNTRY GENTLEMAN. As I called on my friend E. P. WILBER of Cummington, Mass., he gave me a paper containing the amount of butter which he sold from his five cows from the first of May up to the first of January. The number of pounds sold was 1,013, which at market brought 21 cents per pound, amounting to $212.73—deducting $10.13 for freight, leaves a clear income of $202.60—in favor of each cow, $42.54. His cows were of the native breed, with good care and common keeping.

Plainfield, Mass. A SUBSCRIBER.

MILKING COWS ONCE A DAY.

MESSRS. EDITORS—I saw in your No. for Jan. 9, from my own county of Litchfield, a statement saying that if well fed, cows would give as much as if milked twice. I confess it to be a new idea, and I thought that some of our young men of the present day, as well as some that were older, would subscribe to it at once, for it surely would be less work. With the experience of fifty years, with from 5 to 25 cows, I cannot endorse it. I have tried it, and with good feed I could get nearly two-thirds as much for a while, and then half as much. My course for drying a cow has invariably been to milk her once a day, and it worked admirably. If there is any secret about it, let us all be profited by it, and save the labor of our hands. JUDSON WADSWORTH.

West Winsted, Conn.

[For the Country Gentleman and Cultivator.]

Produce of a Butter Dairy of Ten Cows.

MESSRS. L. TUCKER & SON—At my request Mr. ALBERT YALE of Guilford, Chenango Co., when renewing his subscription to the Co. GENT., handed me a statement of his dairy for the year 1861, which I enclose. His farm is one of the most noted dairy farms in this county, and also one of the smallest, yet equalling in profit, many of more than double its size. There are but 56 acres under improvement. A description of this farm, and a more extended notice of his manner of feeding to produce such results from each cow, will be found in Co. GENT. for 1860, vol. 17, No. 10. J. *Bainbridge, N. Y., Jan.* 28, 1862.

Statement of the proceeds of the Dairy of ALBERT YALE, *for* 1861.

The number of cows I have milked this season was 10, the same as last year. My memorandum shows that the first tub was filled March 16. My cows calved, mostly, in the month of March.

Total amount of butter made, lbs,	2,785
Amount sold,	2,305
Leaving amount used in family and on hand,	480
Amount of sales of dairy 2,305 pounds, at 23 cents,	$530.15
Amount used and on hand, 480 pounds, at 23 cents,	110.40
Eight deacon skins at 50 cents, sold,	4.00
Three calves raised on skim milk	17.50
Value of pork raised, deducting cost and corn,	59.05
	$721.10

Making the average to each cow $72.11. Number of pounds to each cow, 278½.

You will notice above that there are 11 calves accounted for, and but 10 cows. One cow had *two calves*.

To farmers that are keeping a dairy, I would say in the first place, *cut your hay* EARLY, and get it in in good order. This is part of the great secret in bringing your cows through the winter in proper condition to be profitable the next summer. Then give them *enough* of this and no more. When I see a farmer forcing his cows to eat *straw* one half of the time, and the other half, daisies, weeds or dry woody stuff *called hay*, with a shower of full ripe seeds falling from it at each forkful, and no grain to offset, I mark that man as one who will never get rich from his dairy alone. The proper place for the straw is *under* the cow. Give her a good soft bed, and keep her clean. Never *compel* a cow to eat straw. When the fall rains begin, I put my cows in the stable through each storm. During the winter months they are most of the time in the stable and are let out twice a day for water.

Another point. If dairymen would take more pains in selecting their cows, and breed them to some thoroughbred bull, of the best milking families, and feed them better, it would not be necessary to keep but one half the number of the general average of cows to make the same amount of butter. During the fall and early winter I prefer to feed roots; but after they are well dried off, commence with one pint of meal to each cow, until within about one month of calving, and then increase to 1 or 2 quarts once a day; after calving, 2 quarts at a time, twice a day. Keep them on this feed until they have been to grass 8 or 10 days, when I decrease the feed gradually each day. ALBERT YALE.

In Mr. Yale's statement for 1860, he gives the proportion of each grain in the meal used by him, &c. J.

Turnipy Taste in Milk.

I notice that your correspondent J. M. HARPER, speaks of the taste *unavoidably* given to milk by feeding turnips. I find it perfectly easy to avoid it entirely, by feeding the turnips immediately after milking; they then impart no taste whatever to the milk. I have tried this plan for two years, and find it an invariable rule. J. ATKINS.

Fonthill, C. W.

[For the Country Gentleman and Cultivator.]

FARMING IN MASSACHUSETTS.

Messrs. Editors—As this is the season for sleigh-riding and visiting, I will give you an account of a recent visit I made to the family and farm of Wilbur Wilson of Agawam.

After taking care of my stock, I harnessed team and crossed the ice bridge on Connecticut river, two miles south of Springfield, and a drive of one fourth of a mile brought me to the house of Mr. Wilson. In a short time after my arrival, Mr. W. invited me to visit his premises. After going the rounds, I asked a few questions, and I will give you his answers.

Mr. Wilson owns 220 acres, which are divided as follows: His home lot consists of 45 acres, which is under a high state of cultivation, and here he raises corn and roots principally. His corn crop the past season yielded when dry and shelled, 98 4-5 bushels per acre, weighing 60 lb. per bushel. His corn was planted in drills, 2½ stalks per foot, and when land is in a high state of cultivation he prefers drills to hills.

Of roots he raises a great variety, but prefers the sugar beet above all others for feeding purposes, and considers one acre better than any two acres of corn raised in Conn. Valley. He thinks that sugar beets are the best and cheapest feed for store hogs, and his hogs look as though they were not starved. In speaking of turnips, he says there is no need of having turnipy milk or butter if fed at the right time. His plan is to feed on a full stomach, so that all the turnip smell may pass off while the cow is digesting her food, and before it penetrates her flesh and milk.

Mr. Wilson owns 45 acres on the Agawam meadows, which is kept for hay, and without any top-dressing he cuts 100 tons of good hay. This he feeds to his stock, and considers it the very best of feed for stock of all kinds.

A short way from the home lot, he owns 60 acres of plain land, where he gets his wood, and cuts some hay; the balance he pastures. His pasture lot in Chester contains 100 acres, and is devoted to pasturing young stock in the summer, of which he has a good many; and in fall all are brought home to enrich the home lot.

Mr. Wilson's stock consists of 39 head neat stock, 5 horses, 3 colts, 6 Chester county breeding sows, and 2 boars. Of the number of neat stock, 18 are thorough bred Short Horns, 13 are two years old and coming in this spring; the balance are calves and yearlings. There are 4 young bulls in the above number which are well worthy of looking at, sired by Hamden, who is a superior animal for beauty and pedigree. Two of the above cows are celebrated for their milk and butter qualities, one giving 26 quarts beer measure per day; the other making 17 lbs. butter per week. The bull Hamden is thorough-bred, 4 years old, and for symmetry and action he has few equals in the Conn. Valley, and has always taken the highest prize where he has been exhibited. Mr. Wilson is worthy of praise for the pains he has taken in selecting his stock as regards their milking properties and their pedigree, and the buyer must be difficult to please who cannot make a choice out of his herd, as he makes it his business to raise and sell stock of all kinds, and none but the best.

Mr. Wilson's manner of feeding is as follows: Morning, hay and then water; noon, roots; evening, cut feed, afterwards hay, and water at 7 o'clock at night.

His barn is 36 by 100 feet, built with cellars underneath. Upper floor for hay and other crops. First cellar for stock, and underneath is a root cellar and tank for liquid manure. This he makes compost of, as follows: He prefers muck, but any other earth will answer. He saturates the heap with the liquid, and covers with plaster for a time, and then mixes all well. This is applied to his corn in hills, and also to his roots.

Mr. W. intends having more in small fruits, as his land is well adapted for such, and is only 2 miles from Springfield, the best market on Conn. Valley.

It is a pleasure to visit such farmers as Mr. Wilson, who are always ready and willing to give information when desired, not theoretically but practically, and Mr. W. is a practical farmer and one who is well qualified to instruct the young farmer on all agricultural subjects, both as regards economy and practice, and in making the most from a small capital, and such was Mr. W.'s beginning.

Mr. Wilson is a constant reader of the Country Gentleman, and he says he has derived much valuable information from its columns, and would advise all young farmers to subscribe for it, so as to keep up with the times. I may visit other farms, and should this meet with your approval and a place in Co. Gent., I will give you the items of my visits. J. W. *West Springfield, Mass.*

HOW TO MAKE A GOOD HEDGE.

I intend to put a hedge fence around my nursery and fruit garden—where can I get the seed and how should the plants be managed till the fence is complete.

Randolph Co., Indiana. G. GEBHART.

The Osage Orange will probably prove best, although it generally fails at the west and everywhere else, for the same reason that the corn crop would prove a failure if the seed were scattered over an unplowed pasture, or in the middle of the highway. The best way would be to purchase the plants, as failure generally results from attempts to raise them from seed by those not familiar with their management. They may be had of Bateham & Hanford of Columbus, Ohio, and probably of E. Y. Teas of Richmond, Indiana. Set them out 8 inches apart, when one year old, on land with a dry subsoil, or near the line of a good underdrain; wait till the buds begin to swell, so as to see that all the plants are good, to avoid any gaps. Let them grow one year, with a good cultivated strip of mellow soil five feet wide on each side. Cut

Fig. 1.—Hedges a Humbug.

them down two inches high the second spring, and again three inches higher before midsummer. The third spring cut them down to within 5 inches of the last, and at midsummer again 6 or 8 inches higher. Two more cuttings should be made the fourth year, by which time, if the hedge has been well managed, it will be a good barrier. It must have been well cultivated on both sides at least five feet wide, or a strip of mellow soil ten feet wide in all, several times a summer, during all this time,—which is cheaply done by horse labor. Without this cultivation,

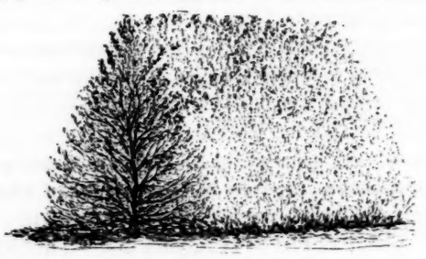


Fig. 2.—Hedges a Success.

or if the hedge has been set close to a fence, where it cannot be cultivated, it will certainly prove a complete and total failure, like the one represented in the fig. 1, instead of the one shown in the second figure, which has been well pruned and cultivated.

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1862.

NEW-YORK STATE AG. SOCIETY.—We give, on another page, a brief account of the proceedings at the annual meeting of this Society on the 12th and 13th ult. The new Executive Committee met and organized at the Society's rooms, Friday morning. The matter of locating the next Exhibition was then deferred until the meeting of the Committee in March, at the request of gentlemen from Rochester, who desired additional time in which to complete their preparations before presenting a formal application and guarantee on the part of that city. We need scarcely add, that the length of time which has now elapsed since our State Fair has been held in Western New-York, together with the unusual facilities of access and accommodation which Rochester affords to the farmers of all localities, render it certain of a brilliant success if located there—whatever the character of the times may be—which will not only extend very greatly the Society's sphere and means of usefulness, but which must also be gratifying to the public-spirited citizens of that place, and largely promotive of its general interests and prosperity. Upon the line of the Central railroad, and receiving also the rich tribute of the whole Genesee Valley, Rochester, from east, south and west, can draw such an attendance the coming year, as will be sure to remunerate her liberally for the expenses she will incur; while, if the season prove, as we trust it may, a season of peace regained, and agricultural prosperity fully restored, we might almost hope to witness an exhibition there, unparalleled, either in its character or in the number of its visitors, by any in the whole history of the Society.

ANNUAL MEETING OF THE ALBANY COUNTY AGRICULTURAL SOCIETY.—The annual meeting of the Albany Co. Agricultural Society was held at the Mayor's Court Room, in the City Hall, on Wednesday, the 8th day of January, 1862. The President called the meeting to order, and announced that it had been convened according to the provisions of the constitution. In the absence of John Wilson, the Secretary, R. H. Bingham was appointed Secretary pro tem. After the usual report of the Treasurer, and other officers, had been received by the President, it was resolved that the election of permanent officers for the ensuing year be postponed until the 12th day of February, at the City Hall, Albany, and in pursuance of this adjournment, the members of the Society met, and on motion of J. C. Cuyler, Esq., the Chair appointed a committee of six to nominate permanent officers for the ensuing year, who reported the following ticket, which was unanimously elected:—

President—WILLIAM TUTTLE, Coeymans.
Vice-President—Peter B. Noxon, Ireland's Corner
Treasurer—Robert Harper, Albany.
Secretary—R. H. Bingham, Albany.
Directors for Three Years—Jas. W. Jolly, Coeymans, and Joseph Hilton, New Scotland.
Directors for Two Years.—Chas. Bentley, Westerlo, in place of William Tuttle, elected President; John Waggoner, Guilderland, holding over for two years; John H. Booth, Bethlehem, and H. L. Godfrey, Albany, holding over for one year.

PREMIUM ON NURSERY TREES.—GEORGE GEBHART of Union City, Indiana, suggests the expediency of offering premiums for well grown nursery trees, at horticultural exhibitions. He states that he has visited some thirty different nurseries, and it is his opinion that by far the greater number of the three and four year old trees are spoiled by bad pruning. The suggestion is a good one, and in such a locality, where bad pruning is so common, the exhibition of well raised trees might tend to a material improvement. A few trees only of each sort, could be thus exhibited; but an acre of well grown trees, or an entire nursery, (to be examined only by a *competent* committee,) would be the best test of the skill of the nurseryman.

GOOD CROP OF CORN.—In the Notes on Cayuga County Farming, in our last volume, a fine crop of corn was mentioned, growing on the farm of Wm. D. Osborn of Port Byron, and which was estimated then as promising 70 bushels per acre. A note just received from the owner, says, "The field of corn, which you noticed when at my place, gave me 920 bushels of sound corn, and about 50 of poor. The field contained six acres." This is at the rate of 161⅔ bushels of ears per acre, or probably not far from 90 bushels of shelled corn.

FRENCH WHITE ZINC PAINT.—We have made a trial of the White Zinc Paint, manufactured by the Vieille Montagne Co., advertised in this paper, and sent us by J. M. STRONG, the agent in New-York city. We placed it in the hands of a skillful house-painter, and he states that it is far superior to common zinc paint, possessing more purity and body—and is consequently worth considerably more per pound. The smooth white surface which it forms is very satisfactory. Judging from this specimen, it is an excellent paint.

THE REBECCA GRAPE.—Hovey's Magazine says, "We know nothing among grapes, either native or foreign, superior to a well ripened Rebecca." The drawbacks are, moderate growth, small foliage with some liability to mildew, and the necessity for some protection in cold localities. The same authority states that it is as early as the Diana, is of the nature of the Delaware, and requires the same generous culture.

☞ A friend calls our attention to the fact that Punch's new Almanac for 1862, "advises the farmers to sow their Ps, keep their Us warm, hive their Bs, shoot their Js, feed their Ns, look after their potatoes' Is, and then take their Es." The old Latin author wrote

"Fas est ab hoste doceri,"

and the above advice is mostly wise, as well as witty. We may add, however, this farther remark: It is also Ys to do all things in C-son; feed 'A liberally in cold weather; do not Ts your milch cows with shouts and bl-Os, remembering that cruelty has no X-Qs (excuse); finally, Cs every opportunity for the acquirement of information.

LARGE HOGS.—Owen Buel of Easton, Washington Co., recently slaughtered six hogs and six pigs, whose weights were as follows:

Old Hogs.	Pigs.
465	416
500	448
534	452
483	419
501	372
421	380
2,844 old hogs.	2,487
2,487 pigs.	
5,331 total weight—average weight, 444¼ lbs.	

The above is the best lot of pork that has been killed around here in a good while. Can you beat them?

CALEB GRIFFEN.

POTATOES, &C.—Prince Albert, White Mercers, and Peach Blows, are the favorite varieties of potatoes raised here. Spring wheat has averaged about 10 bushels per acre for the year 1861. Peaches do not appear to be profitable here, for the trees die in a few years. Some of our tanners say that red oak bark is the best for tanning purposes, and others that rock oak bark is still better. J. T. H. *North Chester, N. J.*

FARMER'S CLUB.—A subscriber at Sturbridge, Mass., writes us that they have recently established a Farmer's Club in that town, and that its discussions, which are well attended, have proved interesting and valuable.

☞ The Massachusetts Society for Promoting Agriculture has offered premiums for several years, upon various Experiments with Manures. The Secretary of the Society R. S. Fay, Esq., presents some interesting statements of the trials made during the season of 1859, in a just published *Part* of its Transactions. The conditions of these trials were: five lots of land to be selected, equal in quantity and quality; each of the five lots to receive a deep plowing, a shallow plowing, and a harrowing; four of the lots to be manured in equal quantity, as follows:—the manure on No. 1 to be *plowed in deep*, on No. 2 *shallow*, on No. 3 buried *slightly*, and on No. 4, left upon the *surface*—No. 5 receiving no manure at all. The following is a summary of the results that were reached—the total number of experiments being thirteen:

No. 1—Deeply Manured.				No. 3—Harrowed in.			
Best crop in	2	experiments.		Best crop in	6	experiments.	
2d	do.	1	do.	2d	do.	4	do.
3d	do.	3	do.	3d	do.	2	do.
4th	do.	6	do.	4th	do.	1	do.
No.. 2—Shallow Manured.				No. 4.—Surface Manured.			
Best crop in	4	experiments.		Best crop in	1	experiment.	
2d	do.	7	do.	2d	do.	2	do.
3d	do.	1	do.	3d	do.	7	do.
4th	do.	1	do.	4th	do.	4	do.

No. 5—Without Manure—product smallest in 12 out of the 13 cases, in one instance the crop having rusted on lot No. 1.

Mr. Fay remarks:

"So far as these experiments have gone, they go to show that, for an immediate crop, at least, plowing the manure under very deep does not produce corresponding return, the best result being very nearly equally divided between that which was plowed in shallow and that which was only harrowed in. Where the manure was left exposed on the surface a better result was obtained than where it was deeply covered. We have yet to learn the effect of manuring deeply or lightly with a view to succeeding crops, a fact of infinite importance to the farmer. The late Mr. B. V. French once tried the experiment by plowing in the manure of half a field 'as deep as he could get it,' and then treating the entire field alike, manuring the whole of it equally, and plowing it in very slightly. He kept an account of the product for several years, and the yield on each part was alike—to use his own language, 'I never saw anything of the manure which was buried deeply; it was, in my opinion, *thoroughly buried*.'

"In these experiments, in order to have a completely satisfactory result, sufficient manure, say not less than ten or twelve cords of barn-yard manure, or its equivalent, should be used to the acre; enough, at all events, to have the effects of it felt during the period of the trial. One great mistake in our farming is, to attempt manuring too large a surface. An acre of land highly manured will produce vastly more for five years, without any further addition, than a fifth of the quantity annually applied for the same period."

☞ We see by the papers that a "Sorghum Convention" was held at Columbus, Ohio, Jan. 7, at which "farmers from every part of the State were present, and the Convention having been turned into an experience meeting, much valuable information was drawn out." Samples of Sorghum Sugar to the number of 15, said to be of "very fine color and handsomely crystallized," were exhibited, together with large quantities of syrup. Cook's Evaporator was very highly spoken of for sugar making. The correspondent of the Tribune, from which these particulars are derived, states that "about 3,000,000 gallons of syrup were made in this State (Ohio) last fall, which has been sold at an average of 60 cents per gallon, or about $1,800,000!"

Cotton Culture in Illinois.—Extract of a recent letter to the Editors of the Country Gentleman, from Hon. W. H. Osborn, President of the Illinois Central Railroad Company:—"Cotton was produced here from the earliest settlement of the State, until fifteen or twenty years since, when the economy in the use of machinery in its manufacture brought the price so low that hand-looms fell into disuse. No one appears to have abandoned it because there was anything in the soil or in the climate, which prevented its culture; and the great necessity which now exists for the extension of our cotton fields will evidently lead to its extensive cultivation in this State."

Are our Soils Exhausted?—Under the above in your issue of the 23d inst., you make a quotation from an English paper, and append to it some remarks of your own which are very worthy of consideration. My object just now is to bear testimony to a fact which does not seem to be properly understood or appreciated, outside of our own State at least.

For the last three years my business has led me into every county in the State, and has required that the productive industry of every section should be thoroughly investigated, as by that the true value of the lands could be best arrived at. I aver then, without the fear of contradiction in truth by any person, that so far from our soils being exhausted, *they are growing more productive every year*. There are individual instances where the soil may deteriorate, but by far the largest number of farmers in every county in the State, so manage their farms that they are growing more fertile from year to year. In some sections more attention is paid to the making and application of manure than in others; but as a general rule, the land is everywhere improving, and has never been in so productive a condition as at this very time. I know whereof I do affirm. P.

Darien, Genesee Co., N. Y.

[We are glad to have our own opinion supported by that of an authority so well qualified to judge with regard to this mooted question. Our correspondent has had extensive opportunities of observation throughout the State, as a member of the State Commission for the Equalization of Tax Assessments; and we desire to call the attention of the Mark Lane Express particularly, to the unhesitating manner in which his statements are asserted. Eds. Co. Gent.]

☞ The remarkable Fat Ox which we noticed in visiting Franklin Co., Mass., a year ago, we see by the Greenfield Courier, has just been sold. The owner was Hon. John Sanderson of Bernardston, and the purchaser Mr. Bryan Lawrence of the New-York City Central Market. The price paid is said to have been $500. The following is given as the accurate admeasurement of the animal, "as made a few days ago by a gentleman entirely disinterested: Girth behind the fore legs, 10 feet 4¾ inches; round the belly, 11 feet 5¾ inches; distance through the belly, 4 feet 6 inches; length from root of horns to square end of buttock, 9 feet 5 inches; distance between outside of fore feet, 3 feet. His weight is not accurately known, but it is undoubtedly from 3,700 to 4,000 lbs." We should much like to know whether this size has ever been exceeded, in this country at least?

Corn for Fuel.—The Henry County (Ill.) Chronicle of Dec. 17, says that there is no doubt but much Indian corn has been used for fuel in some parts of that State. "Farmers say they have counted the cost of shelling and marketing their corn and the price obtained; also the value of a bushel of corn for fuel compared with one of coal; and have arrived at the conclusion that there is no profit in exchanging corn for coal, all things considered. They contend that a bushel of corn is worth as much as one of coal for fuel; and, if this be true, it does seem that to sell corn to buy coal is labor without profit. So far as *present* prices, argued solely from the stand-point of profit and loss, are concerned, farmers are burning their corn by a correct business rule."

Inquiries and Answers.

USE OF LIME.—Some of our farmers have been spreading lime on their corn ground during the past fall, and I would like to know the experience of your readers as to which, in their opinion, is the best time to spread lime—in the fall or spring? Some of my neighbors contend the strength of the lime ascends in the air; others, that it goes down, and if you plow it under you will not get the benefit of it all again. What is your theory in regard to these opinions? J. T. H. *North Chester, N. J.* [As the effects of lime last several years, it makes very little difference at what season it is applied, provided it is well pulverized, so that it may be evenly spread, and not in lumps, which can be of very little use. It cannot evaporate—it may sink into the soil, if copious and long continued rains occur before it becomes converted to a carbonate, which must be in a few days at furthest. After that, the carbonic acid brought down in rain, may dissolve it very slowly and in almost infinitesimal portions. The fact that the effect of a dressing of lime is sometimes known to last 20 years, shows that it is not easily carried off. If sown on grass, nothing further is necessary; if on plowed land, harrowing may serve to mix it with the soil.]

ASHES, AND ANIMAL MATTER, AS MANURE.—What is the comparative value of leached (soap-boiler's) with unleached ashes? And what are they worth per bushel,—where stable manure can be had at, say, 10 cents per horse cart load? Also, is the offal (mostly livers, lights, and hearts of hogs,) at slaughter-houses, considered valuable as a manure? If so, what is the best way to manage and apply it? R. [As we have often published answers to the first question, it may be only necessary for us to say briefly here, that both leached and unleached ashes are usually but not invariably useful as manure. The condition of the soil has much to do with their success; and experiment is the only sure test Leached ashes are of course several times weaker; but different manufactories leave greater or less potash remaining. Usually, one to five loads of leached ashes per acre are a material help to the land, sometimes strikingly so—and if to be had at a reasonable rate, we should certainly recommend a fair and accurate trial to be made. And if good manure could be had at 10 cents per horse-cart load, we would advise to keep one horse at least employed in drawing through a large part of the year. The comparative value of ashes and such manure will vary in different places, and must be ascertained by careful experiment. The refuse matter spoken of forms exceedingly rich manure, and may be made into good compost by mixing in alternate layers with turf or muck, and allowing it to stand half a year or more.]

DISSOLVING BONES.—Will you, or some of your correspondents, give, through THE CULTIVATOR, directions for dissolving bones with oil of vitriol? W. F. SEGAR. *Alton, R. I.* [Sulphuric acid will not dissolve bones well, unless they are previously ground to powder. If the bones are whole, or cracked into fragments, it will require months for the acid to dissolve every part, and even then the operation will be imperfectly performed. After the bones are ground there are two modes. One is to place the bone dust in a heap on a wood floor, wet it by means of say half its weight of water, and then add gradually, as it is stirred over, nearly as much sulphuric acid, stirring frequently for several days. The other mode is to place the dust in a cask or tub, wet it by adding a rather larger portion of water, or nearly its own weight, as the cask will hold it, stir well, and then add, by weight, nearly half the weight of the bones in sulphuric acid. Stir rapidly, and when thoroughly mixed pour out the mixture on the floor, and prepare another portion, adding it in turn to the heap. Let it remain some days, till all parts are intimately combined. Being of the nature of a paste, it must be rendered dry enough for spreading by mixing with it some dry powder, as dried peat, pulverized charcoal, coal ashes, &c., but no alcaline substance as wood ashes, lime, &c. The sulphuric acid costs some two cents per pound in large quantities, and it is doubtful whether the benefit derived from this manure would pay its cost for most crops.]

MOLE PLOWS.—What is the best mole plow, and where is it to be had? W. S. P. *Erie Co., N. Y.* [There are a number of good mole plows, manufactured principally at the west. We have seen one of these operate satisfactorily, both in making a simple mole through the subsoil, (two and a half feet deep,) and in drawing in a set of tubular tile strung on a rope. It was then sold by J. Dunham of Etna, Tompkins Co., and perhaps might be had of C. Bartholomew & Son of that place, who are extensive implement manufacturers, It may be well to remark that there are very few of the subsoils of the country adapted to successful mole draining, even where free enough from stone to run freely. The texture must be such as to form a smooth face as the plug passes, and one which will not crumble down in the lapse of years. This can be determined only by trial.]

BREEDING SOWS.—I would like to know how soon after a sow has littered will she take the male—have heard they would in two or three days. Is it so, and if so, is it advisable to do it? B. [Sows should not be allowed to have more than two litters a year,—the period of gestation lasting nearly four months, and leaving about two months, more or less, between each period. Although they may often take the boar sooner, yet it is unadvisable.]

OYSTER SHELLS FOR MANURE.—I wish to inquire of you or some of the readers of your publication, what is the best method of applying Oyster Shells as a manure? J. S. G. [Burn them to lime, and apply as other lime—say 25 bushels per acre. They are sometimes crushed or ground in a bone or bark mill, and spread, without burning. There is a very small amount of animal matter, say one two-hundreths part, and the dissipation of this by burning would but slightly lessen the value. They would be most quick and active by burning to lime, and more enduring perhaps if crushed and spread, requiring and admitting a more copious application in the latter instance.]

MUCK.—Will you please tell me through your paper, if muck from the common sand land, is of much value—if so, how to compost (or mix) with stable manure? W. J. S. [Our correspondent is hardly distinct enough in his inquiry. Muck is vegetable matter, mostly found in low wet places or swamps, to which it has either been washed through the lapse of ages, or has gradually accumulated by the growth and decay of water plants. The only difference between such muck as found in sandy or in clayey regions, is in the greater or less amount of silex or alumine respectively, composing the earthy matter. The most clayey would make the best absorbent of manure, but either would doubtless answer a good purpose. To prepare it for composting, throw or draw it out in heaps during the dryest part of the year, keep it as dry as practicable, and place it in alternate layers with common manure, one-half or two-thirds muck. The thinner the layers of each, the more perfect will be the compost. If taken out in winter, it will be heavier with water, and need longer drying. If possible, provide a shed or thatch to keep off rain, and let it dry half a year. It contains, when saturated, about nine-tenths water—and unless quite dry in cold weather, will freeze into lumps. It is far less efficient as an absorbent of manure, when not dry.]

PLANTING NEW GROUNDS.—I have a lot (2 acres) twice as long back as it is front, which I want to improve, and get ready to build upon, when able; the house to be in the centre 60 feet from the front. Please recommend some book or plan that will give me good advice as to how to work, and oblige R. MC'C. *Xenia, Ill.* [We cannot do better than refer our correspondent to the plan figured and described on page 30 of the Illustrated Annual Register for 1861, and to those on pages 238 and 239 of the Register for 1860, or 2d volume of *Rural Affairs*. The article on Landscape Gardening, containing the two last named plans, affords many practical suggestions in relation to laying out, planting and managing grounds. On p. 270, volume first, of Rural Affairs, our correspondent will find directions for preparing the ground for and planting orchards and fruit gardens—with many hints in other parts of both these volumes.]

MANGEL WURTZEL.—In growing Mangel Wurtzel is there (or would there be) anything gained by growing the plants in a forcing bed and transplanting—if so, when should they be transplanted and when sown to be fit for transplanting? P. *Montour Co., Pa.* [For field crops, the seasons are long enough for the full maturity of the crop, if the land is rich, in good order, and is kept well cultivated. The mode above mentioned would be troublesome and expensive and would not pay.]

HOW TO TRAP FOXES.—A "Young Farmer" wants to know how to trap foxes. I will try to give him a "recipe" by which, if he possesses a moderate portion of ingenuity, he will be able to get rid of a number of them. Let him take a good steel trap, the less rust on it the better, and smoke it well with any mild smoke, (I hang mine in the chimney) for a day or two; then do not handle it with bare hands, but with mittens or gloves. Take it to some place where the foxes travel a good deal, and dig a small hole in the snow, put the trap in and cover it lightly with snow, and lay a

piece of meat down on the snow directly over the pan of the trap, (hog's liver is the best,) as negligently as possible, and then obliterate all the tracks within a rod of the trap. The fox in passing will scent the bait, and go up near it. He will then walk around it a good many times, scenting the ground all around the bait; then he will, if he don't smell the rust of the trap, pounce upon the meat, putting both fore feet on it, and of course, if the thing is well arranged, he will be fastened. P. S.—Mind and set the trap in an open lot, and not as would be supposed, in the woods. FOX HUNTER.

TOBACCO.—Will you please tell me through THE CULTIVATOR, where I can buy tobacco seed, and a work giving directions for growing and preparing for market? J. R. [The seed can be procured at most of the seed stores. We know of no work specially devoted to tobacco culture, but you will find an excellent practical treatise on its culture in Onondaga County, in the vol. of THE CULTIVATOR for 1860, commencing on page 338. If you have not the vol., we can send it to you bound and post-paid, for $1.]

WASHING MACHINE AND CLOTHES WRINGER.—I saw an article in your paper, signed P., from Manchester Vt., on the Union Washing Machine, who says he procured it from the manufacturer, at a distance of over two hundred miles, from a notice he saw in the COUNTRY GENTLEMAN, but don't say where that was. I wish to inquire through THE CULTIVATOR, where they can be had and at what price? [Of L. Johnson & Co., 457 Broadway, New-York, at $8 to $10.] I would say that we have one of Colby's Clothes Wringers, which we have had a few weeks, and we like it first rate so far, as it wrings very dry and don't hurt the clothes. DAVID BERRY. *Newington, N. H.*

HARROWING WHEAT.—I have determined to harrow my fall wheat. When is the proper time to do so? It is rank, and I have pastured it lightly with sheep. J. O. H. *Kentucky.* [As early in the spring as the frost leaves the ground and the soil becomes dry enough to crumble to a fine powder. Use a harrow with as fine teeth as practicable. If one could be made with numerous fine teeth, pointing a little backward, so as to become strictly what the English writers term a *drag*, the work would doubtless be more perfect.]

COMPOST.—In tearing down an old house to build again, I had a lot of old plastering; I have mixed it with hog manure and half rotted cornstalks. Will the manure be too strong for garden crops if applied next spring? *Montour, Co., Penn.* [This compost will not be too strong for gardens, unless the amount of lime in the mortar, from some peculiarity of the soil, might be in too large a quantity, which, howeveer is not probable, as it must by this time be thoroughly converted to a carbonate. It is important that this compost be very thoroughly intermixed before applying.]

INQUIRY.—I have a valuable yearling heifer, which is large and very fat, but has a hard cough. Any sudden start or slip on the ice causes her to cough several times in succession. I do not know but it is caused by her being so fat, and the flesh pressing on her throat; or is it some disease of the throat or lungs? I have heard it said the Short-Horn breed of cattle are subject to a cough of this kind. Can any of your subscribers give me any information on the subject. S. B. S. Roxbury, Conn.

USE OF SALT.—B. T. R. asks you or me about applying salt to his corn ground. When I apply salt for corn, I put on the salt after the land is plowed in spring, or immediately after the corn is planted, and at the rate of about 280 or 300 lbs. per acre; but that amount will do nothing at killing grubs or worms. If they are to be killed with salt I am afraid it would require enough to kill all vegetation for a time. I believe refuse salt can be got at Syracuse at about $5 50 per ton, delivered on board boat. I bought 18 tons loose salt three years ago at that rate; two years ago I paid 75 cents per barrel of 280 lbs., barrel included.

JOHN JOHNSTON.

RAISING WATER.—I wish, while some of your contributors were writing articles on Water Rams, some one would send you an article on raising water for barns by a wind mill where Rams cannot be used. B.

GOOD HOGS.—A correspondent of the *Field Notes*, states Mr. J. C. Smith of Warren County, O., fattened, the past season one hundred head; they were killed and packed by Edward Jones, of Middletown, Butler Co., O., on the 18th day of Dec. They weighed in the aggregate net, 43,154 lbs., being an average of 431 54-100 lbs. In 1860, Mr. S. fattened one hundred head, which averaged 467 lbs.

Agricultural Societies.

PENNSYLVANIA.—The following are the officers chosen by the Pennsylvania State Ag. Society, at their Annual Meeting, held at Harrisburgh, Jan. 21:—

President—THOMAS P. KNOX.
Vice-Presidents—1st dist., John Rice; 2d, Frederick Showers; 3d, Charles K. Engle; 4th, Robert M. Carlisle; 5th, Wm. Stavely; 6th, Isaac W. Van Leer; 7th, Tobias Barto; 8th, Jos. Grayhill; 9th, Martin Early; 10th, Chas. A. Luckenbach; 11th, Daniel G. Driesbach; 12th, Amos E. Kapp; 13th, B. G. Peters; 14th, C. Eberly; 15th, D. O. Gehr; 16th, Thaddeus Banks; 17th, John P. Beck; 18th, James Miles; 19th, Michael G. Traut; 20th, Jas. Slocum; 21st, John Murdock, Jr.; 22d, Moses Chess; 23d, Joshua Wright.
Addditional Members of the Executive Committee—William Colder, Jr., J. R. Eby, Jacob Mish, James Young and John H. Zeigler.
Corresponding Secretary—A. Boyd Hamilton.
Chemist and Geologist—S. S. Haldeman.
Librarian—John Curwen.

Bucks Co.—This Society held its Annual Meeting at Newtown, Jan. 16. From the reports submitted we learn that the whole amount received by the treasurer during the year is $1,605.76, and the expenditures for the year were $1,359.09, showing an excess of receipts over expenditures of $246.67. The Society's property amounts to over $7,000, and its debt to about $3,000. The following officers were chosen for the New-Year:

President—HECTOR C. IVINS.
Vice-President—John Blackfan.
Recording Secretary—John S. Brown.
Corresponding Secretary—Pierson Mitchell.
Treasurer—Silas Cary.
Board of Managers—James C. Finney, Lewis Buckman, Edw. H Worstall, Joseph Fell, James W. Newbold, Isaac B. Brown, William Stavely, Wilson D. Large, Cyrus Hillborn, Alfred Blaker—William R. Beans—William T. Rogers, Edward Taylor, J. Paul Knight, John Robbins.

OHIO STATE BOARD OF AGRICULTURE.—At the Ohio State Ag. Convention held at Columbus, Jan. 8th, the following persons were elected as members of the Board for 1862: N. J. Turney, Pickaway Co.; Jacob Egbert, Warren Co.; N. S. Townshend, Lorain Co.; H. B. Perkins, Trumbull Co.; T. C. Jones, Delaware Co. Mr. Trimble and Mr. Reber declined a re-election, and Mr. Turney and Mr. Egbert were elected in their place. The Treasurer, G. W. Potwin, not being present to report the financial condition of the Board, D. E. Gardner stated that the Society was never in a better condition, there being over $3,000 in the treasury. After the adjournment of the State Agricultural Convention, the State Board of Agriculture met at their rooms in the State House and organized for 1862, as follows:—T. C. JONES, Delaware Co., President; Henry B. Perkins, Trumbull Co., Rec. Sec.; David Taylor, Columbus, Treasurer; John H. Klippart, Columbus, Cor. Sec. A meeting of the Board was held the next morning, Jan. 9, at which a resolution was adopted to hold the next Fair at Cleveland, conditional upon its compliance with the usual requisites.

INDIANA STATE BOARD OF AGRICULTURE.—The Indiana State Board of Agriculture have elected the following officers: JAMES D. WILLIAMS, President; William H. Bennett and S. Fisher, Vice-Presidents; William H. Loomis, of Indianapolis, Secretary; H. A. Fletcher, of Indianapolis, Treasurer; J. D. Williams, S. Fisher, C. Fletcher, jr., A. D. Hancock and W. H. Bennett, Executive Committee. The Tenth Annual Fair will be held in Indianapolis, commencing September 29th, and will continue during the week.

AMERICAN POMOLOGICAL SOCIETY.—The President of this national association, Hon. MARSHALL P. WILDER, has appointed Sept. 17, 1862, for the commencement of its ninth session, which is to be held in Boston. This institution was established in the year 1848, and has held meetings in the cities of New-York, Boston, Philadelphia, Cincinnati and Rochester, and has exerted a powerful influence in systematizing and advancing the science of Pomology throughout the Union. In conjunction with this appointment, the Massachusetts Horticultural Society have ordered its annual exhibition for this year to take place on the same week.

☞ I consider the COUNTRY GENTLEMAN one of the best agricultural papers published in this country, and its truly national spirit should commend it to all true Union men who are interested in agriculture or horticulture.

Baltimore, Jan. 15, 1862. J. L. D.

[From the Boston Post.]

COE'S SUPERPHOSPHATE OF LIME.

Evidence of its Excellence and Superiority.

The following letter, written by Dr. GEORGE B. LORING of Salem, we regard as one of the strongest attestations in favor of the Superphosphate of Lime that has yet been published. Dr. Loring is a gentleman of the highest intelligence, and is an experienced, almost life-long, agriculturist—one whose practical acquaintance with crops, lands, tillage, and in fact all the details of farming, is only equalled by the scientific knowledge of which he is the possessor. Managing a very large and well known estate in Essex county, where he has been able to give the article a thorough trial, h's commendation of Coe's Superphosphate of Lime carries unusual weight. His position as an influential and respected member of society will also cause his opinion to be closely regarded.

SALEM, Dec. 19, 1861.

Gents—I am happy to state that the experiments made with your Superphosphate of Lime last spring, were highly successful.

I used it on corn and root crops, and in my garden, both alone and combined with other manures. Upon a piece of new land, about seven-eighths of an acre, into which I turned with the sod eight cords of barnyard manure, composted with sand and muck, I applied a small quantity of Superphosphate in the hill, and planted it with corn. The land was a strong clay loam. The growth of the corn was very vigorous, and the yield was eighty-seven bushels. I turned the barnyard manure under the sod, not because I approve of such a mode of applying manure, but because I thought it might serve future purposes, and in order to test more fully the merits of the Superphosphate.

In preparing my land for roots, especially mangolds and ruta bagas, I also plowed in barnyard manure, and drilled the land for sowing. In the drills I used manure, ashes and Superphosphate; and of the three I found the last furnished me with the heaviest crop.

As a stimulant to early garden produce, I found it invaluable.

When used alone it is a convenient substitute for manures of a greater bulk. How long its effects would last in this way I cannot say. But combined in the manner I have represented, it evidently hastens crops in our short seasons, and of necessity increases them largely. Yours truly, GEORGE B. LORING.

Messrs. Coe & Co., 19 Broad-St., Boston. Feb. 27—w&m1t.

CRANBERRY PLANTS
OF THE BELL VARIETY.

Bearing, plants, $3 per 1,000. Send for circular.

New Rochelle or Lawton Blackberry—canes well rooted, $3 per 100.

Raspberry canes, well rooted, of all the choice kinds.

Grapevines—Delaware, Concord, Hartford Prolific, and other new and choice varieties, at low prices.

Hop Tree, (Ptelia Trifolia,) for ornament and use. For sale by

F. TROWBRIDGE & CO., Nurserymen & Dealers,

Feb. 27—w4tm1t. New-Haven, Conn.

ENGLISH PRIZE CUCUMBERS.—

The best varieties for forcing, many of them from fifteen to twenty-four inches long. They will be mailed, postpaid, to any address upon receipt of the price affixed:

	Per Packet.
Ayre's Perpetual Black Spine,	25 cents.
Chinese, new, green, very long,	10 "
Colney Hatch,	25 "
Carter's Sultan,	25 "
do Champion,	25 "
Cuthill's Black Spine,	25 "
Gladiator,	10 "
Gigantic White,	25 "
Lord Kenyon's Favorite,	25 "
Lynch's Star of the West,	25 "
Gen. Canrobert,	25 "
Ipswich Standard,	25 "
Minster Abbey,	25 "
Roman Emperor,	25 "
Ne Plus Ultra,	10 "
Sir Colin Campbell,	25 "
Victory of Bath,	10 "
Sion House,	25 "
Weeden's Symmetry,	25 "

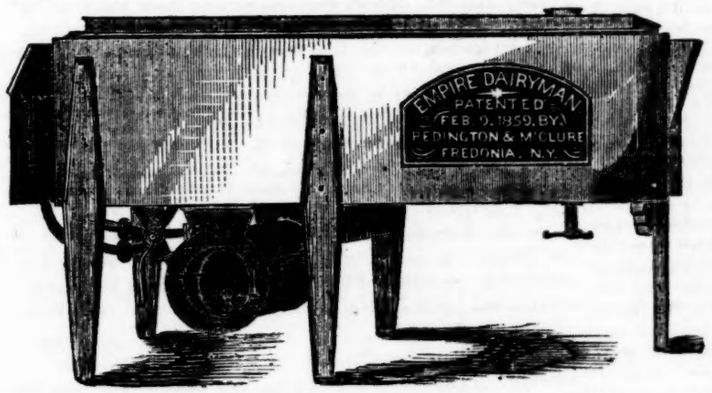
Address B. K. BLISS, Springfield, Mass.

Feb. 20—w3tm1t.

EMPIRE DAIRYMAN,

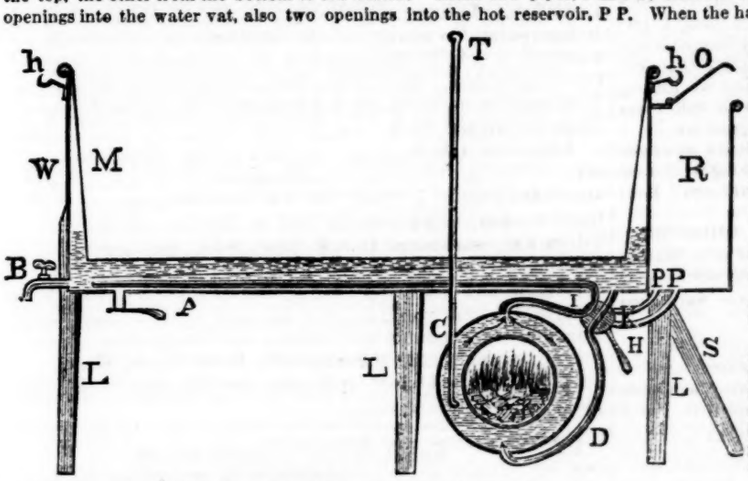
PATENTED FEBRUARY 9, 1859, BY

REDINGTON & McCLUER Fredonia Chautauque Co. N. Y.



DESCRIPTION OF THE APPARATUS.

The annexed plate is a sectional drawing of the apparatus, in which M represents the milk vat inserted into the water vat W. The milk vat is held to its place by the hook—hinges h h. B represents the faucet for drawing off the water under the milk. A is the whey cock. L L L are three of the legs—the apparatus has six legs. S the swing legs for lowering or raising one end of the apparatus. The faucets A and B are now inserted at the end where the swing legs S are fixed. The reservoir for hot water is placed at the end R. It is made of galvanized iron, with an iron lid or cover O, to prevent the escape of steam when the water is boiling. The heater C is a double cylinder, with door register and damper in front, and pipe-funnel on the back end. In this heater the water circulates freely between the two cylinders around the fire. From this heater there are two openings by pipes—one from the top, the other from the bottom of the heater. These two pipes, I and D, connect with six way-cock K. The six way-cock has two openings into the water vat, also two openings into the hot reservoir, P P. When the handle of the six way-cock H is turned down, as in the engravings, the passage from the heater into the water box are open, and when fire is kindled, the warm water rises through the opening in the top, and passing along a tube in the bottom of the water vat, is distributed under the milk vat. At the same time the cooler water in the water vat runs back down the pipe D, and enters the heater at the bottom, to be warmed and raised again into the water vat. This circulation continues increasing the temperature of the milk gradually and uniformly until the requisite heat is attained, when by raising the lever H, the openings to the water vat are shut, and those into the hot water reservoir are opened, and by a similar circulation the water is heated there for scalding.



There is a point at half turn of the handle H where the openings to the heater are closed. To prevent any accident from carlessness in leaving the lever at half turn, the safety-pipe T is inserted into the heater. This will give warning if the lever is wrong by raising the water so that it will run over the top of the tube, and if allowed to run too long, will be apt to burn the packing in the heater, and make it leak. Explosion or collapse is impossible.

Pamphlets containing full particulars will be furnished on application to the proprietors, REDINGTON & McCLUER, Fredonia, N. Y.

Feb. 20—w1t—m1t.

LARGE VINES OF THE CONCORD, CREVELING, DELAWARE, DIANA, HARTFORD PROLIFIC and REBECCA, for immediate bearing. Prices reasonable. Catalogues sent to applicants enclosing stamp. HEFFRON & BEST,
Feb. 6—wtfm3t. Utica, N. Y.

TRUE DELAWARE GRAPEVINES,
FROM THE ORIGINAL VINES,
One year old, 50 cents to $1; 2 years old, and strong layers with fruit wood, $1.50 to $2. Less by the dozen or hundred.
Also Cuyahogas at $1 to $1.50; Allen's and Roger's new Hybrids, Crevelings, Dianas, Concords, Hartford Prolific, Rebeccas, and
Many other Valuable Kinds, New and Old,
at as low prices as they can be had from any reliable source.
Descriptive price lists sent to all applicants.
Feb. 13—w9tm2t. GEORGE W. CAMPBELL, Delaware, Ohio.

OSIER WILLOW—Salix Purpurea.—Cuttings and Plants at low prices. HEFFRON & BEST,
Feb. 6—wtfm3t. Utica, N. Y.

OSIERS—PURPUREA, VIMINALIS, TRIANDRIA, and six other finest varieties—$2 to $3 per 1000 Scions.
Grape and other cuttings; Fruit Tree Grafts, Seeds, &c., of all kinds, at low rates.
Honey Locust Seed 40 cents; Yellow Locust 65 cents; Osage Orange $1 per pound. PRINCE & CO.
Jan. 30—w&m1t. Flushing, N. Y.

A NEW GOOSEBERRY AND
NEW RASPBERRY
from the great West. The Gooseberry is large, smooth, prolific, of fine flavor, and free from Mildew. The Raspberry is a black cap, even larger and finer than Doolittle's Improved. Circulars sent on application. HEFFRON & BEST, Utica, N. Y.
Feb. 6—wtfm3t.

NEW AND CHOICEST VEGETABLE
AND
FLOWER SEEDS.
BY MAIL POSTPAID.
The subscriber offers the following selection of RARE SEEDS, on terms to suit the times: The new French Tree Tomato. This has the form of a tree, about two feet high, and is self-supporting. Fruit large, color scarlet, very productive, and of good quality. Also Lester's Perfected, and the Scarlet and Golden Cluster Tomatoes. ——The Pomegranate; fruit about the size and color of the Lemon; extra for sweetness.——Asparagus Bean, a variety—the pods attain the length of two to three feet. When young and tender we cook these pods, and serve as asparagus, which are very delicious.——Strawberry Pea, in height about six inches, very prolific, of good size and quality.——New variety of Spring Wheat from Japan; the most productive grain known to us.——Also an extra variety of Red Sweet Corn, Paris Red Cos, and India Lettuce; German Sweet Turnip, Cabbage, Sea Kale, Mammoth Mustard, Japan Pie Melon, Negley's Improved Cucumber, Madras Radish, very choice, fine solid pods for pickling or salad: Dwarf Broom Corn, Hubbard and Pineapple Squash, &c.

Our FLOWER SEEDS will include many of the new and choice varieties, such as Hunt's Sweet Williams, Double Zinnia Elegans, Hedewigi, (new Japan Pink,) Asters, (new and rare sorts mixed,) Hyacinth Flowered Larkspur, Verbena, Acroclinium Roseum, Gaillardia grandiflora, Chrysanthemum, (new,) Camellia Balsams, Lythum Roseum, Blue Bells of Scotland, Godetia, Bee Larkspur, Prussian and Dwarf Morning Glories, Salpiglossis, Red and Blue Tassal Flower, Green Centered Helianthus, Rose of Heaven, Marvel of Peru, German Stock Gilliflower, Golden Bartomia, Petunia, Solanum, (atropurpureum,) a splendid parlor plant; Scarlet Egg Plant, Evening Primrose, Snapdragon, Portulaca, Forget me-not, &c., &c.

Any person may select ONE PAPER of either of the above varieties of Seeds, and remit to us ONE DIME, or 5 papers 25 cents; ten papers 40 cents; twenty papers, 75 cents; or thirty papers for $1. You can select a part from the Vegetable and a part from the Flower Seeds to make out these numbers, if you choose. Send current bills, small silver or gold coin, or United States postage stamps.
Jan. 23—w2tm2t. L. NORRIS, Windsor, Ashtabula Co., Ohio.

IMPORTANT TO CHEESE MAKERS.
THE ONEIDA CHEESE VAT,
Ralph's Patent, is superior in practical utility, material and workmanship to any in use. Though but recently patented and introduced to the public, the demand for them is unprecedented. Circulars containing a general description, sizes and prices, sent by mail on application to WILLIAM RALPH, Holland Patent, N. Y., of whom State, County and Town rights for this valuable improvement may be obtained on reasonable terms. Jan. 16—w&mtf.

Agricultural Books for Sale at this Office.

SHORT-HORNS AND ALDERNEYS
FOR SALE.
The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

BERKSHIRE SWINE AND YOUNG
SHORT-HORN BULLS FOR SALE.
Berkshire Sows to produce litters in April and May next varying in price from $20, $15 and $10 each, and Boars old enough for propagation, at the same prices. Boxed and delivered on rail car or slip-board. L. G. MORRIS.
Jan. 23—w&mtf. Scarsdale P. O., Westchester Co., N. Y.

GOODRICH'S SEEDLING POTATOES.
I. Varieties.—1. Garnet Chili, red. 2. Pink Eye Rusty Coat, white. 3. Cuzco, white. These three are all round, and ripen with the season. The first two yield very largely, and possess a higher degree of hardiness and adaptation to all soils and weather, than any other sorts known to me. The Cuzco is a little less hardy, but is the largest yielder within my knowledge. 4. Copper Mine, slightly copper colored, longish, in hardiness like the Cuzco, and two weeks earlier than the three preceding.
These four sorts have all white flesh, grow closely in the hill, do not push out of the soil, and are very smooth and beautiful, except that the Cuzco is a little deep eyed. In most localities they have all acquired a good character for table quality. They have been selected in a thirteen years experiment, from more than ten thousand new seedlings. In good soils and seasons, and with fair culture, they will readily yield from 250 to 350 bushels to the acre, while in the hands of many of my correspondents, they have far exceeded those figures.
☞ I have no very early sorts that are well tested, but hope to have such by 1864.
II. Age and Diffusion.—The Garnet Chili is a seedling of 1853, and has been before the public for six years. It is now more extensively cultivated than any other new variety, and is beginning to be sold under new names. The other three sorts are seedlings originated in 1856, and have been in market but two years. They are all already known in nearly every State north of Virginia and Kentucky, and in Canada.
III. Price.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck, CASH IN ADVANCE. The larger price is charged for the smaller quantities from the proportionably greater cost of packing and delivery.
IV. Transmission.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts shall be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.
☞ Sums of less than $1 may be sent in 3 cent postage stamps.
☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.
CHAUNCEY E. GOODRICH, Utica, N. Y.
References.—From among very numerous persons who have cultivated these and others of my seedlings for the last two years, I select the following:—George Buckland, Toronto, Canada West: Geo. Bachelder, Stanstead, Canada West. H. M. Cram, Vergennes, and Albert Breese, Hubbardston, Vt. Charles H. Gleason, Holden, Wm. Bullard, Dedham, and Wm. F. Bassett, Ashfield, Mass. Horace Humphrey, Winchester Corners, Ct. Jesse Vaughn, Cheektowaga, Samuel J. Wells, Fayetteville, E. W. Howell, North Chili, O. C. Chapin, East Bloomfield, John Bowman, Baldwinsville, and Edward Merritt, Poughkeepsie, N. Y. W. W. Griscom, Woodbury, and Benj. Sheppard, Greenwich, N. J. P. B. Gray, Half Moon, P. Sutton, Pittston, and Aaron Bombaugh, Harrisburgh, Pa. Yardley Taylor, Loudon Co., Va., J. Howard McHenry, Baltimore, Md. J. C. Holmes, Lansing, and S. T. Douglas, Detroit, Mich. S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill. Feb. 13w&m.

STEEL PLOWS
We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.
We would refer to the following persons who have them in use:
John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.
"Mohawk Valley Clipper," No. 1, full trimmed, all steel,.. $15.00
do. do. with cast point,..... 14.00
"Empire," No. 1, with cast point, full trimmed,..... 15.00
For Three-Horse Plows,..... $1.50 extra.
For Adjustable Beams, ... 1.00 do.
We also manufacture Sayre & Klink's Patent Tubular Shank
STEEL CULTIVATOR TEETH.
These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become loose in the frame, like the former, nor to break, like the latter. They are as readily attached to the frame as any form of tooth.
SAYRES' PATENT HORSE HOE.
This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.
Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order
☞ SEND FOR A CIRCULAR.
REMINGTONS, MARKHAM & CO.,
E. Remington & Sons, Benjamin P. Markham, Geo. Tuckerman. Ilion, Herkimer Co., N. Y.
March 21—w&mtf.

Coe's Superphosphate of Lime.

The following decisive testimony to the value of Coe's Superphosphate as a superior fertilizing agent, is from Hon. Amasa Walker of Massachusetts:

NORTH BROOKFIELD, Nov. 26, 1861.

Messrs. Coe & Co., Boston—Gentlemen: You may recollect that I had of you last spring a quantity of Superphosphate of Lime. I made use of it in several ways—in each case with satisfactory results. First, on corn. I planted one part of a field with the use of fifteen loads of barn manure to the acre, and the other part with your phosphate—a small handful in each hill, probably at the rate of three hundred pounds to the acre. That which was planted in the latter way was quite as vigorous and thrifty as in the former, and yielded as largely. This much exceeded my expectations. Secondly, I used the phosphate in planting potatoes, and obtained an excellent crop in exhausted pasture land, plowed up for the purpose. Thirdly, I used the article for a dressing for an oat crop—with no other manure, and the land previously in low condition. I got 40 bushels to the acre, by the application of 300 pounds of phospate.

Fourthly, I applied it upon an old and long exhausted pasture land, at the rate of 600 pounds to the acre. The effect was wonderful, and where almost nothing of any kind had previously grown, I had a full growth of white clover, which the cows fed down too closely, and which showed itself so green, as compared with its surroundings, that it would be plainly distinguished at a great distance.

I made a similar experiment with your phosphate five years since, on a part of the same pasture, and the good effects of it were as visible last year as ever. A rich sward is formed where there was formerly nothing but gray moss and a little struggling June grass.

From these and other similar experiments made for several years, I am satisfied that our old pastures, many of which have been grazed for the greater part of a century, and have become so exhausted by cropping as to be almost worthless, may be rendered very fertile by the application of Superphosphate and other similar fertilizers, and at a cost that will pay. Lean pastures are the greatest drawbacks upon our agriculture in the older parts of New-England. To keep cows through the winter and half starve them all summer, is not a very profitable, though very common operation.

I have this fall sowed my winter wheat with phosphate alone for manure, at the rate of 300 pounds to the acre; and although the land was the poorest and most exhausted I had on my farm, I have no doubt of a good crop. We are succeeding admirably with wheat in this part of the State, and artificial fertilizers aid us very much. One strong argument in favor of phosphate of lime, and similar manure, is that they can be transported to fields at a considerable distance with little extra cost. I applied my barnyard manure and compost in fields near home, and cultivate all distant lots with portable manure.

My intention now is to use a much larger amount of the Superphosphate of Lime next year than I have done before, especially on corn and grass lands. I am, very respectfully, your obedient servant.

(Signed) AMASA WALKER.

COE'S SUPERPHOSPHATE OF LIME.—
Office 19 Broad-Street, Boston.

For Testimonials of the value of this article, address COE & CO. as above. April 4—wly.

BERKSHIRE PIGS FOR SALE—
OF PURE BREED.

$5 each when six weeks old. WM. J. PETTEE,
Jan. 9—w&mtf. Lakeville, Conn.

THE FARMER'S LIBRARY.

We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 8th vol. of which is now completed. The price of the Eight volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 8, can be had separately at the same price. The Eight volumes will be sent per Express to any part of the country, on receipt of $6.

"RURAL AFFAIRS"---2 vols. 12 mo.

These volumes consist of a reprint of our Illustrated Annual Register, from its commencement to 1860, with the omission of the Calendar pages and advertisements, and comprise a great amount of matter relating to almost every subject of interest to the Country Resident, and are illustrated with over Eight Hundred Engravings, including Laying Out and Planting Ornamental Grounds and Farms, Plans of Farm Houses and Cottages, School Houses, Barns, Ice and Smoke Houses, Garden Structures, Domestic Animals, Farm Implements and Machines, Fences and Gates, Plants, Trees, &c., &c. No Farmer's Library should be without this work. Price $2—or $1 each, sent by mail prepaid. L. TUCKER & SON.

THE BEST OF STOCK—IMPORTED SILESIAN SHEEP and their descendants—Morgan and Messenger Horse Stock, of as good blood as can be found in the United States; and Suffolk Pigs. Address WM. H. LADD, Richmond,
Feb. 14—wly. Jefferson Co., O

100,000 BARRELS OF THE
LODI MANUFACTURING CO.'S
POUDRETTE
FOR SALE BY
JAMES T. FOSTER,
No. 66 Cort'andt-St., New-York.

THE large facilities which they enjoy by exclusive contract for all the night soil of the city of New-York, and the large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking COST and YIELD into consideration. It will be sold at the usual price of $1.50 per barrel for seven barrels or over, delivered free in New-York city.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-Street, to No. 66 CORTLANDT-STREET.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call attention to the following experiences of practical farmers in different sections of the country:

NORTH PEMBROKE, MASS., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., etc., with indifferent success, in the spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last spring I procured from your branch office in Boston about 30 barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I plowed about two acres of light sandy soil, which had laid in grass about six years (the last crop of grass being very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, ME., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first I got sick of it, and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor who bought the other barrel says if he had bought five barrels more he would have saved the price of twenty barrels. Yours, &c.,

V. B. PAUL.

WALDO, ME., Oct. 12, 1861.

To to the Lodi Manufacturing Co.:

Gentlemen—Last spring I bought from Cross & Newell one barrel of your Poudrette, as an experiment, with but very little faith in its utility. I put it on 6 rows of corn in different parts of the field, after manuring with barn-yard manure in the usual way—at the second time hoeing, where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year

Yours, &c., WELLINGTON SHOREY.

SMYRNA, DEL., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it. Yours, respectfully,

JOHN G. BLACK.

CHESTER, PA., Sept. 14, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette, and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Needle's New Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c., A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address

"JAMES T. FOSTER,"
Care of Lodi Manufacturing Co.,
Jan. 2—w13tm3t. 66 Cortlandt-St., New-York.

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GREAT WESTERN COTTON-WOOD,

one of the largest and most magnificent trees of the western forest. The Cotton-wood is very easy of propagation, and remarkably tenacious of life; the cuttings take root more readily, the tree grows more rapidly, and bears transplanting with less inconvenience than any other forest tree, attaining at the age of 3 or 4 years a height of from 15 to 25 feet, with a wide, dense pyramidal head, putting on its foliage early in the spring, and retaining it till late in the fall, affording an amount of rich, luxuriant shade not to be obtained by any other means in the same time. The tree flourishes in every variety of soil from the rich alluvial river bottom to the highest sandy ridges. The cuttings will be taken from young thrifty trees, and if planted according to directions, which will accompany each package, will all be sure to grow. Parties wishing to adorn their grounds with a novelty, and one of nature's noblest ornaments, can do so at a trifling cost by addressing HENRY CHAPMAN, Waterloo, Blackhawk Co., Iowa.
Feb. 20—w&m1t.

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CHOICE AND RELIABLE FLOWER SEEDS.
See B. K. Bliss' Descriptive Seed Catalogue.

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See B. K. Bliss' Descriptive Seed Catalogue.

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Prices moderate. Seeds warranted genuine. Catalogues containing accurate descriptions of **1,350 varieties of Flower Seeds,** and upwards of **350 varieties of Vegetable Seeds,** with special directions for the culture of each variety, will be mailed to all applicants enclosing a three cent stamp. Address B. K. BLISS,
Feb. 20—w3tm1t. Springfield, Mass.

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Seeds of this highly improved variety mailed at 40 cents per ounce, or 10 cents per packet. Remit in stamps. Address
ROBERT BUIST & SON, Seed Growers & Nurserymen,
Feb. 20—w2t. Philadelphia.

NEW FRENCH ERECT OR TREE TOMATO
(De Lage.)
Grows in the form of a bush, very showy, productive, and of good flavor, (50 seeds.) 15 cents. Lester's Perfected Tomato, true, (100 seeds,) 10 cents.
The above will be mailed to any address upon receipt of the price affixed. Feb. 20—w6tm1t. B. K. BLISS, Springfield, Mass.

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Also two Bull calves, 2 months old, sired by the above, dams from the Wainwright and Hurlbert stock. Apply to M. VASSAR.
Feb. 20—wonceam4t. Po'keepsie, N. Y.

JOSEPH BRECK & SON,
SEEDSMEN & FLORISTS,
51 & 52 North Market-St., Boston,
Offer for sale the choicest collection of VEGETABLE SEEDS to be found in this country, including every new and rare variety, of their own raising or importation, and are warranted reliable in every respect.
By remitting $1, $2, $3, $5 or $10 we will send, free of charge, liberal assortments put up for family use as may be wanted.
Our collection of FLOWER SEEDS, embracing everything new from London, Hamburgh and Paris, are from the best Florists of Europe, and have always proved to be good and true. Such as are raised best in this country are grown by our senior partner, Joseph Breck, Esq., President of the Massachusetts Horticultural Society, whose well known love of flowers will not allow any that are not really fine to grow in his garden, or the seeds from indifferent ones to be sold.
By remitting $1, $2, $3, $5 or $10 the finest selections will be made by himself, and forwarded. Catalogues gratis. Feb. 20—w6tm2t.

BEES—The subscriber will sell a large number of
ITALIAN BEES,
the queens, or full colonies—Two hundred stocks of common bees—Glass honey boxes—Books on Bee Culture, &c. Circular with prices sent on application. Address M. QUINBY,
Feb. 20—w3tm2t. St. Johnsville, Montgomery Co., N. Y.

THOROUGH-BRED DEVONS.—
BULLS AND HEIFERS,
from imported stock. For sale by EDWARD G. FAILE,
Feb. 20—w1yr.* West Farms, Westchester Co., N. Y.

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Feb. 20—w1t.* 129 West Eleventh-St., New-York City.